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ORIGINAL PAPERS.

GALL-STONE CREPITUS AND FRICTION, WITH ILLUSTRATIVE CASES.[1]

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It has been said by some writers that gall-stone crepitus is a most valuable symptom, but the literature is practically silent upon the subject. The presence of this sign has been noted in a comparatively small percentage only of the cases of cholelithiasis, and I have a fixed belief that it is not so constantly searched after as its diagnostic value deserves. The symptoms of gall-stones are often not sufficiently distinctive to render a diagnosis certain, and, in such cases, the recognition of this symptom is of the utmost importance. I have, however, been much interested in a few cases in which the gall-bladder contained calculi that could be palpated, and in all of which a grating sensation could be elicited in the absence of any features of cholelithiasis. Brockbank, in speaking of latent calculi in the gall-bladder, refers to cases that have been recorded in which the stones were felt like nuts in a bag. Old persons may harbor benign calculi owing to lack of muscular force to expel the stones. Frequent and patient practice has taught me that, when calculi can be felt, it is rare that crepitus is absent.

There is in all cases a period of latency during which the stones lie in the seat of their development, usually the gall-bladder. This period may persist, and the patient die at last of some intercurrent affection; more commonly it is succeeded, at varying intervals of time, by attempts on the part

[1] Read at a meeting of the Philadelphia County Medical Society, October 11, 1899.

of the stones to pass out of the portal system, and, as a rule, into the intestinal canal. Modern investigations tend to show that mobile calculi result from infectious cholecystitis, in the presence of which the stones act as irritating foreign bodies; also that gall-stones are produced by this condition. Once the calculi become migratory, in my experience, they are apt to continue so until the condition has been in great part relieved. It is to be emphasized that, after repeated attacks of biliary colic, the ducts become patulous or enlarged from the distending force of the stones, subsequently allowing bodies of considerable size to pass without exciting pain. In latent gall-bladder calculi, and in those in which stones make their exit without pain, the detection of crepitus and friction have no clinical significance; they merely indicate the presence in the viscus of gall-stones. Here should be mentioned the fact that cholecystitis without the presence of any calculi may occasion symptoms of cholelithiasis, but this is not, in my experience, at least, a common occurrence.

Large calculi have been found on *post-mortem* examination in cases in which vague symptoms only were complained of during life. Sometimes a calculus in the neck of the bladder acts like a ball-valve, either giving rise to indefinite symptoms or more rarely presenting no indications of its presence. Eagelson has reported an interesting case of gall-stones in the common duct, with ball-valve action. There was chronic jaundice, and attacks of colic; after the latter ceased the liver appeared to be slightly enlarged, without recognizable tumor in the region of the gall-bladder. At this time the patient developed a rigor every second or third day, followed by a temperature ranging from 102° to 103.5°. "After complete rest in bed for a few weeks she improved in color, and the character of the stool showed that some bile was passing the obstruction. She returned to her home, but as soon as she left her bed the jaundice began to increase and the stools to lose their color again. The return to bed improved the symptoms again. This was repeated two or three times, showing that the obstruction in the duct was much less in the recumbent position than when the patient was up around the house." Pain was absent, but the presence of the floating choledochus stone with ball-valve action was diagnosticated notwithstanding, and this was confirmed by operation. Osler and others have reported similar cases. All clinicians of wide experience have met cases in which the features of gall-stones in the common duct as the cause of a chronic jaundice have been too incomplete for an assured diagnosis.

I am reminded here of a case of my own that showed the constant presence of bile in the feces, and of another in which the liver was decidedly enlarged (contrary to the general rule), with slight variations in the intensity of the icterus. Now, it is in all of these anomalous instances that the presence of crepitus is an invaluable symptom for diagnosis. The difficulty that surrounds the diagnosis may be illustrated also by an allusion

to a case of pancreatic disease reported by Franklin E. Wallace, in which, during life, a tentative diagnosis of gall-stones had been made. The patient was a woman, *aet* forty-six, who had had several prior attacks of pain in the epigastrium, and jaundice, was seized with pain in the region of the gall-bladder, nausea, vomiting and fever. After these symptoms had lasted three weeks, they gradually disappeared under treatment; during the next ten days she was much better, but then the symptoms recurred. The patient was about to be operated upon for gall-stones, but it was deferred on account of her low condition. She sunk at last into a comatose state and died. At the autopsy abscess of the pancreas was discovered instead of cholelithiasis. An excellent illustration of the value of crepitus as a sign was afforded by a case under my care at the Medico-Chirurgical Hospital:

CASE I.—Mrs. L. W., *aet* fifty-two years, white, occupation, housekeeper. The family history gave no clue to the affection from which she was suffering. The patient had had the ordinary diseases of childhood, also pneumonia at thirty-two, and diphtheria at forty years, of age. The latter affection was followed by nervous prostration. The complaint for which she was admitted to the hospital dated back five years. At first she manifested symptoms of indigestion. One week before date of admission (January 23, 1899) she was taken with severe pains in the right hypochondrium, which at times extended up to the right shoulder and around to the back; this was accompanied by nausea. The attack lasted for one day and then disappeared, but returned a couple of days later. These recurrences of colic, with brief intervals of freedom from pain, took place until date of admission, when her suffering was slight indeed. While under my immediate observation there was no jaundice, but the stools showed a visible, though moderate, lack of the normal bile. The liver was slightly enlarged and the gall-bladder was slightly distended. The urine analysis gave a negative result, there even being an absence of bile.

While the history and physical signs enumerated above aroused strong suspicion of cholelithiasis, the absence of jaundice and of the history of chill and febrile disturbance left room for a reasonable doubt as to the nature of the affection. I then examined carefully for the presence of gall-bladder calculi, and although it was impossible to bring them within the grasp of the fingers of the examining hand, deep palpation combined with a gentle lateral and up-and-down movement with the finger tips elicited a distinct, fine grating sensation (crepitus). This was strongly confirmatory, if not absolutely conclusive, evidence that the symptoms were due to the presence of "active" biliary calculi. The patient was now transferred to the surgical department and operated upon by Professor Laplace on January 28th, who removed over 150 stones from the gall-bladder. At the operation slight evidence of cholecystitis was observed, and afterwards the patient made a complete recovery.

Another instance of non-typical cholelithiasis in which the diagnosis rested principally upon gall-stone crepitus may be related:

CASE II.—S. W., *aet* fifty-four years, married, of good social position, consulted me in November, 1897. The family history pointed to gout and rheumatism on the mother's side. Patient had had some of the diseases of childhood and malaria during young adult life. A few years later mild rheumatic symptoms appeared. Two years prior to coming under my observation, the patient began to suffer from symptoms of indigestion and irregular action of the bowels. Pain developed and was present from time to time; its seat was in the lower epigastric region, and only occasionally in the right hypochondrium. There was no history of previous jaundice, but of the loss of twenty pounds in weight.

At the time of my first examination pain was, and had been for a few weeks, more pronounced, but its principal seat was still in the epigastrium, and no tendency to radiation to the right shoulder was shown; the feces were normal in color and the urine contained no bile. The temperature was normal, but the skin showed numerous circumscribed spots of pigmentation, particularly on the face and legs below the knees. On palpating the abdomen considerable tenderness was found over the epigastrium and in the region of the gall-bladder. The latter was somewhat distended and the liver slightly enlarged. On deep palpation during inspiration, I felt crepitus, which at once cleared the diagnosis to a considerable extent.

February 14th I was called to see Mrs. M., who had gone to visit a daughter residing fifty miles from Philadelphia. The patient had had a severe attack of pain on the previous day, and I found her slightly jaundiced; the dejecta were a pale drab color, and the urine contained bile pigment. The attack answered to typical hepatic colic from its description by the patient. A repetition of attacks followed for a period of two weeks, with increasing intensity of the jaundice after each seizure, and two dozen gall-stones were recovered from the feces, varying from a pea to a cherry in size. The jaundice and all other symptoms then speedily disappeared; strength and flesh were also regained with surprising rapidity. Treatment embraced nothing unusual.

CASE III., which presented other phases of interest, may be briefly narrated. M. D., *aet* sixty years, female, English nativity, occupation shopkeeper, first came under my care November 10, 1897. In health the patient had shown a tendency to obesity—height, five feet four inches, weight, 180 pounds. Family history disclosed gout in the mother and rheumatism in the father, and nothing more; previous personal history negative until the onset of the illness for which she consulted me. The first symptoms appeared August, 1896; they were apparently the symptoms of an attack of indigestion, and jaundice was absent. Similar attacks recurred during the next two months, at intervals of several days, and then jaundice supervened

for the first time. After the icterus appeared, slight pain was constant and paroxysms of colicky pains were experienced at times, but they were not severe; neither were they followed by a deepening of the icteroid tint, according to the patient, though this statement may be reasonably doubted. It was obvious that there existed, most probably, an occlusion of the common duct.

Physical examination showed a downward enlargement of the liver of moderate extent, while the region of the gall-bladder was the site of a dense mass of a size equalling that of a hen's egg. The case had been diagnosticated as carcinoma of the liver or its appendages, by several physicians who had previously studied it; but the long duration of the jaundice (a little more than a year), and the absence of a true cachexia and of symptoms indicative of gastric carcinoma, justified a reasonable doubt concerning the correctness of this diagnosis. I now carefully palpated the gall-bladder area, but the result was negative, the patient being rather stout and the abdominal walls unyielding, until I combined auscultation with palpation, when I detected a faint grating sound. It was now clear that the gall-bladder contained calculi, and that the occlusion of the common duct was probably due to the same cause. I am aware that cholelithiasis is a not uncommon cause of carcinoma of the bile passages in persons who are predisposed, and oppositely that rarely cholelithiasis may be secondary to carcinoma of those ducts.

Treatment by olive oil resulted in the removal from the biliary passages per rectum of large numbers of calculi. This was followed by a return to sound bodily health. The condition is, in my experience, quite common in subjects of obesity, and, as in this case, it precludes the possibility of recognizing the crepitus by the ordinary method—palpation. And although my experience with it has been limited, I would suggest the combined method (that used in the case reported above) in cases in which crepitus cannot be elicited by palpation nor a grating friction sound on auscultation.

Remarks.—The object of this paper is not to describe cholelithiasis, but merely to emphasize the value of gall-stone crepitus and friction as diagnostic symptoms of this affection. Obviously their presence, while corroborative, is not essential to an absolute diagnosis in instances of a typical character. On the other hand, irregular cases, by no means uncommon, often do not permit of a positive diagnosis. Here the presence of either crepitus or a grating sound on auscultation (in connection with a grouping of suspicious features) serves as a deciding factor in many instances. Of course we should also examine the stools for stones in all cases of cholelithiasis. It is true that this absolute proof of stones in the gall-bladder is sometimes wanting.[2] Again, in cases in which the gall-bladder is distended and tender,

[2] Courvoissier holds that when enlargement of the gall-bladder is present, the obstruction of the ducts is always due to some cause other than gall-stones—an extreme view.

with or without the presence of calculi in the viscus, there may be an utter absence of stones in the ducts, even in the presence of characteristic attacks of hepatic colic. Curious instances of this sort are to be found in the literature, but these merely constitute the rather frequent exceptions, and do not invalidate the general rule insisted on above, that when the gall-bladder, as often happens, is packed with stones, and a more or less characteristic clinical history of cholelithiasis is obtainable, gall-stone crepitus on palpation or friction on auscultation are most significant indications. I would here offer a few suggestions as to the best methods of eliciting both crepitus, and grating friction.

While examining for crepitus the patient should occupy a dorsal decubitus with legs flexed so as to relax the abdominal muscles (rectus abdominis), and then gentle but deep palpation over the gall-bladder area is to be made. If crepitus is not obtained in this manner, the finger-tips of the palpating fingers should be dipped into the abdominal wall just below the fundus of the gall-bladder and then drawn upward over the organ as though making an attempt to roll the fundus upward and forward. This failing, the patient should be told to inspire deeply, though slowly; this carries the gall-bladder downward and forward, and during its excursion, the examiner, while palpating, should make gentle counter pressure with the finger-tips. The tactile sense of the palpating fingers may be increased by pressing on their dorsal surfaces with the fingers of the disengaged hand so as to put the muscles of the examining hand at rest, as suggested by Pollatchek, and as has been recommended in palpating the appendix. When palpation fails, auscultation should be practiced. By this means we may distinguish a friction sound, and I am of the firm belief that the sense of hearing is more delicate and acute than that of touch. In one of the cases reported above, in which the gall-bladder was filled with calculi, combined auscultation and palpation (*auscultatory palpation*) led to the detection of a friction sound after other methods had failed. In attempting the latter mode of examination, the stethoscope should be placed just below the costal arch, so as to afford space for palpating over the fundus of the enlarged gall-bladder with the finger-pulps of the free right hand.

Lubricant for Genito-Urinary Instruments.

℞ Gum tragacanth, ... gr. xlviii;
Ac. carbol. (95% solution), ... *m.* i;
Glycerin, ... ℥iv;
Aquæ ad., ... ℥iii.

Mix the latter three constituents, pour the resulting liquid upon the gum tragacanth in a mortar and let stand over night. The next day triturate with pestle till a homogeneous mass is formed. It can then be used from an ordinary ointment jar. RUGGLES.

ON THE RELATIVE FREQUENCY OF HERNIA IN THE SEXES AND THE VARIOUS TYPES IN THE FEMALE; A STATISTIC COMPARISON.[1]

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In order to estimate the comparative frequency of hernial disease in the sexes, and different types in the same sex, we must turn to the statistics of those who have had the largest experience with it. These, however, are not as satisfactory nor as uniform as we might expect. Many are incomplete, and besides, in some important particulars, contradictory. It is important, however, if there be anything in prophylaxis, that we should be familiar with the various stages of life in the female in which hernia is most prone to appear, in order, if possible, that effective measures may be instituted to avert it.

In an examination of the statistics on this phase of the subject, we can scarcely resist the conclusion that at different epochs hernia presents itself under different aspects, that its evolution, its complications and accidents vary in different climates and races; and hence, at best, the most accurate statistics of any single observer on any number of cases possess only a relative value.

This at once becomes obvious, when we consult the most complete records of the best known authorities; wherein we may discover error and oversight from the different methods of securing estimates; as when one bases his conclusions chiefly on the examination, as, for instance, of recruits for the army, or when hernia of infancy or early childhood is chiefly considered.

Kingston says that for all ages the proportion of hernia is two males to one female. In this connection, it is interesting to note here how age leads up to a steady increase in the female. In the first year of life he examined 1,516 cases, of which but 107 were females. In the same year he examined 1,053 in adults between twenty-five and thirty years old, in whom he found 207 females. The proportion had tripled. Birkett reports 17,999 ruptures, in all ages, examined at the London Truss Society from 1887 to 1890, of which 3,000 were females. The same author further informs us that ruptures are 10 per cent. more common in the female from sixteen to fifty than in the male. Cloquet concluded, after a large experience, that ruptures are nearly three times more numerous in men than women. McCready, in 21,000 of all ages, found the proportion higher—5.9 males to one female. Berger, in a recent contribution, reports on the examination of 10,000 cases, but is rather reserved on this question of relative frequency.

[1] Extracts from an essay presented at the meetings of the Mississippi Valley Medical Association, Chicago, October 6, 1899.

However divergent the views of investigators may be, on this aspect of the question all must and do agree, that the comparative proportion undergoes radical variation in the sexes at different stages of life.

As a general rule, it may be stated that hernia is by all odds more frequent at birth and in early childhood in the male. As puberty is approached, the female ratio gradually ascends, and the male descends. Now, the greater part of boys' ruptures have disappeared; quite generally all the umbilical and most of the inguinal. Of femoral, as a rule, he has none till later; yet, in the next stretch of time—say from twenty to forty-five years, especially in the married state—the relative gain of the female continues to rapidly ascend. After this age, hernia continues to appear in about the same frequency in both sexes, with a greater tendency to strangulation in the female.

In our time, when operations for the cure of reducible hernia can so often be adopted, it may be noted in the published reports that but few female infants are included; and nowhere shall we see such a thing recorded as a kelotomy or radical operation for femoral hernia in the young child.

The striking contrast in the evolution of hernia in the sexes is, that while the majority in the male are congenital, or discovered soon after birth, in the female visible or tangible evidence of it is uncommon until after the fifth year, except in navel yielding.

In infancy, the female is subject to those inguinal protrusions which may include the ovary, the tube, or uterus. After the fifth year, the femoral appears, which during the child-bearing period is about equal to the inguinal, and after the menopause is considerably in excess. (McCready.) Heath places the proportion of inguinal to femoral in females as about equal. This will, however, only apply to the adult.

Birkett makes a similar indefinite statement when he says that "femoral herniæ are three times more frequent in the female than the male," because, in early life, in both sexes, femoral hernia is exceedingly rare.

Swasy, at the Hospital for the Ruptured and Crippled in New York, in the examination of 500 herniated children under five years of age, was unable to find more than two cases of the femoral type. This, too, is widely at variance with the statement of a distinguished writer who places the proportion of femoral hernia to all others as one tenth. (Thomas Bryant.) No doubt the author had the adult infirmity in mind; although, in order to be accurate, precision in detail is necessary. Kingston, in 1,582 cases of hernia, female, inguinal and femoral, of all ages, found 821 femoral and 761 inguinal, and stated that we seldom meet with femoral hernia in the female before menstruation. In the London Truss Society, in 9,296 cases of hernia examined there by him, during a period of six years, there were but six children under ten years old suffering from femoral hernia. In my own experience with the various ruptures of infancy and childhood, no case of

femoral hernia in either sex under six years of age has ever come under my notice. But all this is changed in the adult, for now, in groin ruptures of young women, femoral is the type we most frequently search for, and invariably in her who has borne children.

Under this head Swasy notes that in 321 herniated women examined, never married, there were 169 femoral and 152 inguinal; but he adds: "Pregnancy had a decided influence in changing the proportions; for of 951 mothers ruptured 575 had femoral hernia."

This would certainly imply that the ultimate development of femoral hernia in the female is sometimes closely related to, or dependent upon, maternity; probably, however, only as a determining factor. It is very doubtful if pregnancy or the parturient state, in relation thereto, can ever be regarded as anything more than a possible aggravating influence, and not as an initial cause.

Umbilical hernia presents itself with greatest frequency at two widely separated epochs of life. The infantile type has little anatomic or pathologic resemblance to the adult, except in its relative position.

Typical adult exomphalos is *par excellence* an infirmity of married women. It is sometimes encountered in men, but never with the distinctive anatomic features of the female variety. Although it appears that many diminutive reducible hernia are cured by pregnancy, this one is reproduced or aggravated by it, and is, furthermore, again very seriously compromised by the throes of labor. It has not been long since surgery could offer no succor to the unfortunate mother afflicted with this infirmity. But what can we accomplish now? Very much, and very little.

As to its comparative frequency, Boyer set it down as seven times more frequent in women than in men. Malgaigus placed the proportion much higher, viz., 18 to 1. Scarpa justly observed that the salient complicating features of exomphalos were never seen in the adult male. In 71 cases Sommering found 54 in women. In 344 cases seen in the London Truss Society there were 315 women. Berger observed it in the female, from twelve years up, and in 2,229 cases of hernia of all kinds found 496 umbilical. In 2,530 herniae in women over thirty years old, he found 693 umbilical. McCready gives the proportion in the sexes as 1.14 per cent. in male hernia, and 15 per cent. in female. Faus has noted that while groin ruptures are comparatively more infrequent in the negro female, exomphalos is much more common than in the Caucasian. In Berger's valuable statistical monograph it is curious and important to note the difference and extent of complications in the exomphalos of the sexes. Thus in 154 males, who suffered from this infirmity, there were but 15 who did not simultaneously have other types of hernia also in other regions. In 12 there was single inguinal, and 95 times double inguinal; while in 498 females, from fifteen years up, in 438 it appeared uncomplicated.

Inguinal hernia of the young adult female becomes relatively rarer than in early life. Its general features are similar to those found in the male; but we discover in her more erratic types, as those appearing through cloacae in the aponeurosis or the conjoined tendon in close proximity to the outer ring. But the essential difference in many is in the contents of the serous envelope, the tendency of its omental elements to undergo cystic degeneration, and the absence of those mammoth protrusions here witnessed in the male scrotal.

In consequence of no highly organized structure passing through the inguinal canal of the female, no type of hernia can be so securely trussed, and none tends more to disappear through the employment of judicious prothetic appliances. Should these fail, surgery quite invariably may be depended on to secure a permanent cure.

Comparative Frequency of Strangulation in Femoral Hernia; Its Obscure Symptomatology, Sudden Advent, Complications, Gravity and Mortality in the Female.

The frequency of strangulation in femoral hernia in women is greater than any other. Many times our patients give us a history to the effect that the first knowledge they had of its presence was when they were seized with the grave symptoms following acute constriction. Not always suspecting the serious character of their trouble, they often resort to temporizing expedients before seeking surgical aid. These herniae sometimes seem to appear on the most trifling provocation, with little or no effort at all, certainly no violence, as was illustrated in a patient of my own, a woman of fifty years, who, while in her garden, stooped down to pick up a rake, when she felt something give in her right groin, and violent colic set in.

This type of strangulated hernia is less amenable to taxis than inguinal, and hence a larger number imperatively require surgical aid. At Guy's Hospital, Bryant, in 142 cases, was enabled to return the protrusion in only 38 by taxis—27.66. In consequence of their great depth, beneath a thick layer of fat, under, or contiguous with, intumescent glands, a small extrusion or an incomplete femoral may escape detection.

Pott and Cooper noticed that when those of diminutive size became strangulated, gangrene and grave constitutional disturbances often promptly followed. Bryant, in 34 cases of gangrenous hernia, had 24 femoral. Holmes regards the femoral as the most unmanageable of all ruptures to truss-pressure; and Birkett declares that "the mortality after operations for femoral hernia is the greatest of all, especially when the strangulation occurs early." Berger points out that this hernia, when strangulated, is attended with redoubtable symptoms. He also notes that strangulation in this type is four times more frequent than in inguinal. He places the accidents following operation for strangulation in the female at 40.50 per cent., and

in the male at 20.7 per cent., adding that "if hernia is infinitely more frequent in the male, it is altogether more serious in the female."

McCready gives the ratio of strangulation as 7 per cent. in the male and 16 per cent. in the female. In consequence of the position of the fullness of a crural rupture, the manner in which it is sometimes bound down by the fascia lata, which it does not clear, and its contiguity with the absorbents which lie along its path, it may assume a flattened or irregular outline, become inflamed and take on many of the surface features of a bubo or an abscess. Sir Jas. G. Simpson has reported a case in which, under a mistaken diagnosis, a femoral hernia was laid open by the bistoury. A case came under my own notice, some years ago, wherein the medical attendant poulticed the mass until the skin broke and the gangrenous intestine discharged its contents through the opening. Another case came under my observation later, to which I was called to perform a laparotomy for suspected "internal obstruction," which proved, on careful examination, to be one of strangulated femoral hernia, the extrusion being largely concealed under a mass of tumefied lymphatics.

Mr. T. H. Southam, in 85 operations for strangulation, had 37 cases of femoral hernia, 35 being in the female—9 between twenty and forty years, 17 between forty and sixty, and 11 between sixty and eighty. In the femoral, the mortality was 40.5; in the inguinal, 38.8, and in the umbilical, 75.0. There were 12 cases of umbilical, all in females between thirty and seventy years.

Exomphalos, Incarcerated and Strangulated; Relative Frequency and Mortality.

Adult exomphalos in the female presents several peculiarly unique features. (1) As to its etiology; in its aggravated form always dependent on the pregnant state or the violence of labor. (2) Its tendency to progressive increase in volume, its pathologic complications and gravity. (3) Its quite general incomplete irreducibility. (4) Its tendency to strangulation, though very slight. (5) Spontaneous or prothetic cure of it very rare.

Of this infirmity, Sir Astly Cooper observed that "pregnancy was the most common cause; and if it existed previously it was quite certain to be aggravated by it, though maternity did not lead to strangulation." Agnew said that in every hundred operations for strangulation, six or seven will be umbilical. This ratio is very far in excess of that given by many other authors. Recently, Tschering, of Copenhagen, and Hogethow, of Madgeburg, in an exhaustive review of the subject, gave the proportion of exomphalos as compared with other herniae as 5.46 per cent. in males, and in females 27.34 per cent. As to sex, Berger places the proportion as one umbilical hernia in men for seven in women. Boyer has affirmed that when

this hernia is strangulated the symptoms are more urgent and it is more quickly fatal than any other.

The mortality attending operative intervention for it has very widely varied in the service of different surgeons. Thus, Chavasse reports four operations performed in twenty-seven years in the Birmingham hospital, with but one recovery; while W. J. H. Stewart was able to collect 34 cases, reported in the *British Medical Journal* and *The Lancet,* for the ten years preceding 1888, all operated on for strangulation, with a mortality of but 7 per cent. Another author records 44 kelotomies for umbilical strangulation in 37 females and 7 males; mortality, 53.6 per cent. The wide discrepancy in the reported results of operative surgery in this type of hernia no doubt arises in consequence of the difference in the interpretation of symptoms and designation of condition; for the probabilities are that many included in Stewart's collection were but aggravated cases of incarceration. Positive strangulation in exomphalos, as compared with femoral or inguinal hernia, is very rare indeed.

In a considerable number of cases of strangulation which have come under my own observation—certainly more than one hundred—I have met with but two of strangulated exomphalos. Both cases were in old women—over sixty—one, the wife of a physician, moribund when I saw her, the hernia undiscovered until that time; the other case I operated on successfully, although strangulation was not complete. The latter was Dr. John Plunkett's patient, of this city.

Relative Mortality after Operation for Strangulated or Incarcerated Umbilical Hernia.

Scattered through the medical literature of the decade—from 1886 to 1897—there are recorded 89 operations for strangulated, inflamed or incarcerated exomphalos. Of these there were 83 in females, the youngest thirty and the oldest ninety-two years old. In 3 the age is not stated. In the 89 of both sexes there were 27 deaths—30.3 per cent. In the 83 female cases, 26 deaths—31.3 per cent. In the six male cases there was one death—16.6 per cent. The average age at time of operation was forty-nine years and nine months—about twelve years later than in the femoral. The youngest were two males; one four months old, the other seventeen years. Average age of mortal cases, fifty-seven years and ten months—all females, except one, a man of seventy.

From the foregoing, it is evident that grave types of exomphalos are not unusual in the female, though very rare in the male. In more than half of the cases, the reporters omitted any reference to the physiologic state, or what influence parturition or pregnancy played as an etiologic factor. In 41 cases in which details as to previous state are included, in 37 the women had borne children.

TALKS TO GENERAL PRACTITIONERS.

OBSTRUCTIVE DISEASES OF THE MALE URETHRA.

BY J. D. THOMAS, M.D.,

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OBSTRUCTIVE diseases of the urethra may be acute or chronic, and are the *bete noir* of the inexperienced. They may cause either complete or partial retention of urine or labored urination. Again, neither of these conditions may obtain, but instead frequent and painful micturition occurs, the bladder being obliged to overfunctionate, and as a sequence the bladder passes from a condition of irritability to that of infective inflammation—cystitis.

"The age of a patient is frequently a guide to the cause of retention of urine in the male," as so clearly set forth in the September number of the INTERNATIONAL MEDICAL MAGAZINE by Prof. O. Horwitz. This affords a good working rule, but as we may find any of the obstructive diseases, with the exception of chronic hypertrophy of the prostate and congenital atresia, in all ages, it is well always to be on our guard.

I wish to emphasize in the beginning that in all of the acute *complete* obstructive diseases the first and foremost aim is to save the bladder. If the obstruction cannot promptly be removed, nor the bladder emptied by the urethra, the viscus should be protected from damage by overdistention by suprapubic aspiration, and this should be repeated when necessary until proper means, surgical or otherwise, can be instituted.

The various obstructive diseases, with very few exceptions, all require different lines of treatment, and the line of treatment to be followed will be governed by the cause.

The obstructive diseases (and obstructions) of the urethra are: Foreign bodies; acute prostatitis; false passage; rupture; stricture; spasm of the cut-off muscles; injury to, or in the neighborhood of, the anus; chronic hypertrophy of the prostate; small meatus; phimosis; pediculated tumors; congenital atresia.

The foreign bodies we usually meet with are calculi, pieces of catheter, gum tubing and gum bands; although any foreign body that can be introduced into the urethra may be met with. With the exception of calculi and broken catheters these foreign bodies find their way into the urethra from erotic motives. Calculi are caught either in the prostatic portion, the

pendulous portion or at the meatus. When caught in the prostatic portion they should be pushed back into the bladder and then crushed with a lithotrite; being small, the debris will readily be washed out with urination. When in the pendulous urethra, efforts may be made to remove them with narrow, long-bladed forceps. If the calculi are soft, they may be crushed *in situ,* but if hard the forceps are likely to slip. I removed one such calculus by working behind it a loop of silver wire. It is not judicious to make too prolonged efforts by these means, for the urethra will be seriously damaged. Failing with the above efforts, an attempt may be made to push the calculus back into the perineum, when it can be removed by perineal urethrotomy. Here, again, force must not be used in the efforts to push it back for fear of tearing the mucous membrane. Rather than use violence in any of the above proceedings, it is safer to cut down upon the calculus *in situ,* and thus remove it. Many authorities say that if it is removed through the pendulous urethra there is danger of a fistula remaining. In my experience, these wounds heal promptly. If the urine is healthy, it will do no harm, and it is unnecessary to tie in a catheter—it is a source of irritation. All that is necessary is to keep the organ clean. In the case of a boy from whom I removed the calculus through an incision in front of the scrotum, the wound healed in a week. When the calculus is caught within the meatus it may be scooped out with the spoon on the end of a grooved director or the meatus may be incised.

Pieces of catheter or gum tubing can usually be removed with some form of forceps, unless too deeply situated. The following case is interesting: O. J., aged twenty-six years, colored, passed a gum band, four inches long by five-sevenths of an inch broad, into his urethra, for its pleasurable effect, and went to sleep with the extremity projecting from the meatus. When he awoke the band had disappeared within. He tried to work it forward by pushing along the under surface of the penis, but failed. For two weeks he was obliged to remain in the house on account of difficulty in walking. From this time on he followed his occupation, that of a teamster—driving four horses, he riding the saddle horse. After the band had remained in the urethra two or three weeks, a slight discharge appeared, which continued up to the time of operation, and in the meantime he was not annoyed with frequent urination and was not obliged to get up at night. The only trouble he experienced was a burning after urinating. Erections caused no pain. The band was in the urethra just one year. On introducing the searcher a calcareous object was struck in the perineal urethra. After cutting down upon it I found it curled up in the bulbous urethra and covered with calcareous deposits. One extremity extended through the membranous and into the prostatic urethra. After removal of the foreign body, examination showed the bladder free from stone. The patient made a good recovery.

A good deal of speculation has been indulged in as to why foreign bodies travel backward toward the bladder. *They do so by aspiration. With each inspiration they are gradually sucked in.*

Acute prostatitis is usually due to a gonorrhea. It is sometimes due to exposure (when the prostate is not healthy) and to injury from instrumentation. To treat this disease efficiently the patient should be placed upon his back, the rectum kept empty, enough morphia given to insure moderate comfort and alkalies administered in sufficient amount to keep the urine *neutral.* When the disease is due to gonorrhea, and improvement does not take place in a reasonable time, say ten days, there is nothing that will give such good results as instillations into the deep urethra and neck of the bladder, with a Keyes' syringe, of nitrate of silver in strong solution, ten to thirty grains to the ounce. This may be repeated as soon as the good effects of the previous injection begin to wane. With proper treatment it is seldom that suppuration takes place, and when it does occur the abscess usually ruptures into the urethra. When acute retention of urine occurs in these cases it is not good practice to wait too long in the hope that the bladder will empty itself by the natural method, but the bladder should be relieved by the introduction of a soft rubber catheter. A repetition of this occurrence may be avoided by hot hip baths or by the application of leeches to the perineum, if there are no contraindications.

False passage is due to violent (I feel like calling it vicious) instrumentation, and occurs, as a rule, in front of the triangular ligament in the bulbous urethra. Nine times out of ten, in the healthy urethra an instrument is retarded, detained at this point from spasm of the cut-off muscles (compressor and deep perineal). By a little delay at this time, on the part of the operator, the spasm subsides, and if the catheter is properly directed it slides through the membranous and prostatic urethra into the bladder. Many times this spasm is mistaken for a stricture, and, for a want of proper knowledge and lack of the *tactus eruditus,* the instrument tears the mucous membrane and a very serious traumatism is committed. In case there is an actual obstruction at this point in the form of a stricture, the same results are frequently seen. An instrument should always follow the urethra. If it is impeded it is being improperly introduced or meets with an obstruction, and under either condition force is malpractice. If an obstruction is met with, the character of the obstruction must first be determined before further proceedings are instituted. If from the history of the case a stricture is suspected, bulbs in gradually decreasing sizes should be passed until one corresponding with the caliber of the stricture is reached. In cases where a false passage has been made, and the patient is still able to empty his bladder, and infiltration is not taking place, the proper treatment is "hands off" until nature has closed the rent, for further attempts only make the rents worse. After healing has taken place, then an explora-

tion may be made, and the condition found would determine the line of treatment to be followed. Where there is a rupture, and retention or infiltration of urine takes place, radical measures must be resorted to. I can better indicate the line of treatment to be followed in most of these cases by reporting a case that came into the hospital while penning this "talk." The patient, a middle-aged man, was sent in, from an adjoining county, during the night. The resident called me up by telephone, stating that the bladder extended above the umbilicus and that the patient had bled a great deal from the urethra, and was still bleeding some from the previous attempts at catheterization. I instructed him to try and pass a soft rubber catheter; failing in this, to leave the urethra alone and aspirate the bladder above the pubis. On calling at the hospital the next morning, I was informed that a soft instrument would not pass, and that its gentle introduction was followed by free bleeding, when the bladder was relieved by aspiration. On examining the patient, I found the bladder again filled with urine. On interrogating the urethra, I found it to be a capacious one, admitting a No. 34 F. bulb down to the bulbous urethra. I then gradually reduced the bulbs to No. 14 F., which number fortunately passed into the bladder. This was removed, and, after some coaxing, a flexible No. 12 F. olivary catheter was passed into the bladder. This was tied in, with the intention of allowing it to remain for a few days, expecting then that the patient would urinate voluntarily. During the manipulation with the bulbs and catheter, more than one rent was recognized, and, with the utmost gentleness, there was a good deal of bleeding. On my visit the following morning, I found that the catheter had been forced out during the night, and that the bladder was again distended. He was now taken into the operating room, where the attempt to reintroduce the catheter proved a failure. The patient was anesthetized, a Wheelehouse's hooked staff was passed to the point of obstruction, and an incision made upon the point of it. After splitting the deep layer of superficial fascia, instead of the bulbo-cavernous muscle showing up red and healthy, it was discolored in spots with black blood, and in cutting through it there was free bleeding, a circumstance that does not usually occur, and along the margin of the blood stream a narrow line of pus was observed, indicating that a small abscess had already formed. After completing the incision, and turning the knob of the staff outward, the urethra could not be recognized. The wound was then spread by passing a ligature through each of its sides and traction made upon them. The parts were so lacerated, however, that I was obliged to find the continuity of the urethra by dissection (requiring about ten minutes); this being accomplished, a grooved director was introduced, which served the purpose for making a free incision. A No. 36 F. sound was now introduced through the entire urethra into the bladder with ease. As the bleeding following the operation was rather free, it was necessary to pass a large tube through

the wound into the bladder and surround this with gauze. I do not consider it good surgery to waste too much time hunting for the urethra in the perineum. Rather than make mince-meat of the tissues it is more precise and expeditious to do a suprapubic cystotomy and practice retrocatheterization, when, with a sound also in the anterior urethra, both ends of the lacerated or torn urethra are under the eye.

Rupture of the urethra, either from fracture of the pelvic bones or direct injury to the perineum, should be treated along the same lines as indicated in the above case. When urinary infiltration has taken place, free incisions should be promptly made.

THE IMPORTANCE OF THE EARLY RECOGNITION OF CARCINOMA UTERI, AND THE METHODS BY WHICH IT IS ATTAINED.

BY E. E. MONTGOMERY, M.D.,

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Cancer of the uterus is a most insidious disease in its onset, and when once the pelvic tissues are extensively involved, the individual is doomed. In its very early stages the disease is very amenable to treatment. In the early history of medicine, cancer was considered a blood disease, and it was commonly accepted that its advent indicated a fatal termination, but more careful investigation revealed that it was local in origin, and judicious and early removal was followed by cure.

The appreciation of the possibility of cure and the serious result when neglected illustrate the importance of its early recognition. The disease may occur at any age. It is generally regarded as a disease of the climacteric, and it is not to be disputed that the majority of cases occur between the ages of forty and fifty, but it is found as early as the twentieth year, and at no subsequent age does the patient become immune. Observation demonstrates that the younger the patient, the more rapid the progress of the disease. The processes of metabolism are more rapid in the earlier years and the greater susceptibility of the individual to the ravages of the disease renders her tissues less resistant to its progress.

Many attempts have been made to discover a parasitic origin for the disorder, but the careful investigation of its course, and patient study in the bacteriologic laboratory, fail to render such a theory tenable. All that we can safely assert is, that injuries to the tissues and subsequent continued irritation are sometimes followed by the development of carcinoma; that trauma and irritation do not always produce the disorder; it is dependent upon the varying susceptibility of different individuals to its development;

or, in other words, to heredity. The influence of trauma and irritation as factors in the production of the disease is rendered prominent by the greater frequency of cancer of the cervix in the multiparous woman and disease of the body in the nulliparous.

The disease has no characteristic symptoms. It is true the diagnosis is frequently based upon hemorrhage, offensive discharge, and pain, as a tripod which should render it recognizable; but a careful analysis of these symptoms indicates that no one, nor even all of them, are confined to cancer of the uterus. In a previous talk we have indicated that hemorrhage may prove a symptom of a great variety of diseases which are in no sense related to malignancy. Any cause which leads to caries of the tissues or putrid decomposition will produce an offensive discharge. Pain is a symptom of many pelvic disorders.

The occurrence of these symptoms grouped together should direct the attention of the conscientious physician to the importance of a painstaking investigation. The disease may involve either the cervix or body. When the vaginal portion is involved it is recognizable as either a proliferating exuberant growth which may have originated in the pavement epithelium, or in the columnar epithelium of the cervical canal. Not infrequently the proliferated masses of epithelium at once break down, causing an excavation which may involve the greater part of the cervical wall, leaving a mere shell.

The route of further invasion depends somewhat upon the original site. The disease originating in one kind of epithelium shows a disinclination to invade the realm of another, consequently the entire cervical wall may be excavated without the disease presenting any sign of break upon the vaginal surface. Again the squamous epithelium forms an extensive mass of disease involving the vagina without invasion of the cervical canal. In cases of lacerated cervix, it is not infrequently found that there is a mixed form of disease in which both varieties of structure are involved and the invasion is more marked.

At no period of life should the serious import of uterine hemorrhage be ignored, but a careful investigation as to its cause should be instituted. Infiltration of the cervix is recognized by localized hardness, which is more distinct and defined than that which is produced by inflammation.

Involvement of the vaginal portion of the cervix is discernible by the fragile, fissured condition of the exuberant growth. Excavated portions show an irregular, crater-like edge, with friable tissue and more or less indurated margins.

Continuous bleeding and discharge from a cervix which presents a normal external appearance should indicate dilatation for digital exploration. Such an investigation would disclose loss of structure, indurated areas, and masses of infiltration.

If the means recommended fail to show certain inflammation, portions

of tissue should be secured for microscopic examination, either by excision of a suspected part, or, where it is not accessible, the scrapings by the curet should be submitted. These means will frequently afford information of the early stage of development, which cannot be distinguished by other means.

The gravity of the disease when neglected, its durability when attacked early, should be sufficient excuse for resort to such measures.

THE DIAGNOSIS OF IRITIS.

BY WALTER L. PYLE, M.D.,

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It is especially important to distinguish iritis from conjunctivitis and from acute glaucoma. If the case is mistaken for one of simple acute conjunctivitis and the ordinary astringents and feeble caustics are used, the iritic inflammation is only further irritated, and the disease is left free to progress to the formation of dangerous synechiæ. It is still more important to distinguish iritis from acute glaucoma, for should atropin, the remedy *par excellence* for iritis, be used in a case of glaucoma, the vision of the affected eye may be speedily destroyed; or, on the other hand, should eserin or pilocarpin, miotics indicated in glaucoma, be used in a case of iritis, the results may be equally disastrous.

The pain is generally the symptom that drives the patient to seek a physician's aid. In iritis it is generally very severe, and is located not only in the eyeball but radiates in the manner of supraorbital neuralgia. It is paroxysmal, and is worse at night. If there is any ciliary involvement the globe is exquisitely tender to the least pressure. These same symptoms may mark the onset of an attack of acute glaucoma. In conjunctivitis the pain is more superficial and of a smarting or burning nature, with the sensation of a foreign body beneath the lids. However, some forms of iritis proceed without severe pain.

Photophobia in a varying degree is present in iritis, although not the conspicuous sign it is in keratitis and retinitis. Unless the cornea is affected there is no marked photophobia in conjunctivitis, and in glaucoma photophobia is usually inconsiderable.

Vision is generally dimmed in iritis, but not suddenly. In acute glaucoma there is sudden and almost complete failure of vision at the onset of the attack. In uncomplicated conjunctivitis, particles of mucus may obscure the cornea momentarily, but ordinarily vision is but little affected.

If the eye is cleansed by boric acid irrigations and the mucus removed, vision is found normal.

The iris is discolored in iritis. Gray and blue irides become greenish and brown irides take on a more reddish hue. The whole iris appears thickened and the surface loses its luster and definition. On close inspection, the vessels on the surface are seen to be greatly engorged and tortuous. The exudation may also be detected by oblique illumination. In glaucoma the iris is discolored, but appears atrophic rather than thickened. However, associate haziness of the cornea may obscure a clear view of the iris, and so deceive a novice. In conjunctivitis there is no discoloration or loss of luster of the iris.

The pupil is commonly contracted in iritis, and is sluggish or fixed and irregular rather than round. Often the presence of projecting tags of pigment may indicate synechial attachments. Synechiae may occur even when the pupil is dilated. In such cases, when there is an attempt at contraction there will be seen re-entrant angles of attachment to the lens capsule. The pupil instead of appearing pure black may seem grayish or really opaque from organized exudation. In glaucoma the pupil is dilated, sluggish, and greenish in color. The pupil is unaffected in conjunctivitis. If there is speedy and complete dilatation of the pupil after the instillation of a mydriatic, iritis may be excluded. This test, of course, must be avoided if there is a suspicion of glaucoma.

The injection in iritis is reddish and most marked near the cornea, with a bright zone of ciliary redness. The vessels run deeply and straight toward the cornea, and are not movable with the conjunctiva. In acute glaucoma the same conditions may obtain. In conjunctivitis the injected vessels are superficial, tortuous, irregular in distribution and freely movable. The injection is red, but less marked near the cornea. However, in a severe attack of iritis, there may be an associate conjunctivitis to confuse the diagnosis, and in a violent conjunctivitis there may be ciliary congestion.

The secretion in iritis and acute glaucoma is chiefly lacrimal, while in conjunctivitis there is an abundance of mucus, seen in flakes and matting the lashes together. The conjunctiva is also much thickened, and the vessels on the everted lid are concealed in the general redness.

The cornea is generally clear in iritis, although there may be deposits on Descemet's membrane. It is of normal sensitiveness. In simple conjunctivitis the cornea is unaffected. In glaucoma it is steamy, and the sensibility is greatly diminished.

The anterior chamber is of normal depth, but may be filled with exudation in iritis. In acute glaucoma, the anterior chamber is very shallow, the iris being pushed against the cornea. In conjunctivitis the anterior chamber is unaffected.

The tension is generally normal in iritis; but in the early stages of the

serous form tension is much raised, and the pupil may be dilated; in the later stages of serous iritis, tension may be diminished. In acute glaucoma marked rise of tension is a characteristic symptom. In conjunctivitis, tension is unaltered.

Summary. From what has been said, it is clear that there should be no difficulty in differentiating iritis from conjunctivitis. The chief distinguishing points are: Discoloration of the iris when compared with its fellow; contracted, sluggish or fixed pupil, turbidity of the aqueous and ciliary injection. From acute glaucoma, the diagnosis is more difficult. Here, besides testing for increase of tension, we have the size of the pupil as a guide in iritis, more contracted than usual and perhaps fixed; in glaucoma, dilated and sluggish. Ordinarily, on account of the turbidity of the media in these acute inflammations, satisfactory ophthalmoscopic examination is impossible, and the condition of the optic disc cannot be determined.

LABORATORY METHODS OF DIAGNOSING TUBERCULOSIS. THE STAINING OF SPUTUM.

BY W. WAYNE BABCOCK, M.D.,

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THE burden of exactness in the diagnosis of tuberculosis is resting more and more upon bacteriologic methods. The frequency of indefiniteness of the clinical symptoms, in this disease, will be readily conceded, and even its most distinctive structural lesion, the tubercle, is simulated in a number of other morbid processes. No special argument is needed, therefore, to emphasize the importance of confirming or disproving suggestive clinical or pathologic alterations by ascertaining if the tubercle bacillus be associated. In the present talk I shall describe in detail certain practical methods of demonstrating this bacillus that have proved their value in the diagnosis of tuberculous affections. Even if you should be entirely inexperienced in bacteriologic technique, the procedures given are, for the most part, sufficiently simple to be readily mastered.

In the search for the tubercle bacillus, it is important to remember that we are not able to make a diagnosis from the shape or size of the bacillus alone. There are too many other bacilli closely resembling that of tuberculosis to permit one to form an opinion merely from peculiarities of contour. Much more distinctive are the peculiarities of staining shown by this organism. Thus, after being

stained, you will find that the bacillus has such a hold upon its dye that you may apply decolorizing agents sufficiently powerful to remove the color from nearly all other bacteria and cells, before this micro-organism loses its staining. No matter how closely a germ may otherwise resemble the tubercle bacillus, it is not to be considered if it does not show this characteristic staining reaction. Although the organism, when stained, does not readily release its color, it also resists the penetration of dyes, and is not colored by the ordinary staining methods used for many other bacteria. By selecting the most powerful of the anilin dyes, increasing their penetrating power by adding a proper mordant and using heat, the resistance to stains is overcome and the tubercle bacillus may be very rapidly colored. After this staining has been followed by decolorization to remove the stain from any associated bacteria, the latter may be recolored by one of the simple stains of a contrasting color without altering the first coloration of the tubercle bacilli present. These are general principles observed in staining this micro-organism, no matter what its source; but it is desirable to add certain modifications dependent upon the character of the material examined. The examination of sputum will be detailed at this time, and later certain other methods, important in the examination of other fluids of the body, will be indicated.

In selecting a specimen of sputum preference should be had for that which has accumulated in the bronchi during the night and is expectorated in the morning. You will, of course, instruct your patient to carefully reject any of the secretions of the naso-pharynx removed by hawking, and to preserve that sputum only which is removed by coughing. To avoid such contamination it is desirable that the patient rinse out the mouth and pharynx before "raising" the sputum. The specimen should be received into clean wide-mouth bottles or covered jars and protected from dirt and dust. No preservative should be added, nor is it essential that the specimen be fresh. The bacillus stains characteristically after remaining many weeks in putrid sputum. If the disease be well advanced a bit of the muco-purulent secretion selected indiscriminately will probably show a number of the bacilli. If this fails, pour the sputum upon a clean black surface, as a glass plate placed over black paper, and, aided by a good light, carefully pick over the sputum, selecting for staining any minute whitish or cheesy particles. The cheesy tuberculous particles may be simulated by particles of food or by the cheesy masses from the tonsillar crypts, so that they are not to be absolutely depended upon.

Having cleansed an unused microscopic slide with soap and water and polished it with a clean cloth, the small portion selected is transferred, by a clean wooden splinter or a wire, to the upper surface of one end of the slide and spread out in a thin, even layer. The other end of the slide is reserved as a handle during the manipulations. After the sputum has entirely dried,

either spontaneously or by the aid of gentle heat, it is to be *fixed* in order to coagulate the associated albuminous principles and to secure proper adhesion to the glass. For this purpose the smokeless alcohol or Bunsen flame is used. The slide being held film side up in the right hand, the surface of the glass under the film is first brought in contact with the flame and then quickly applied to the palm of the left hand. This little procedure is rapidly repeated until the heated part of the slide is felt by the palm to be *burning* hot, when the smear may be considered fixed and ready for staining. It is important not to burn or overheat the preparation, and by frequently testing the degree of heat as above directed this should not occur.

The stain is fuchsin, held in solution by alcohol and combined with carbolic acid as a mordant. The red solution formed, when held to the light, should be nearly opaque; but after several months the solution becomes more transparent, deposits a dark-colored precipitate, and should be discarded. It is conveniently kept in a small bottle with a pipette stopper. Its formula is:

Carbol Fuchsin—

Fuchsin, ...	1 part;
Absolute alcohol, ...	10 parts.
Dissolve and add 5 per cent. watery solution of phenol crystals, ...	90 parts.

In staining, quite a liberal quantity of the carbol fuchsin is poured over the smear, which is then held five or six inches above the flame. The stain is not permitted to boil, and is to be removed from time to time in order to see the faint vapor which indicates that the required temperature has been reached. More stain is added, as required, to keep the stain from drying upon the slide, and sufficient intermittent heating to cause the slight vaporization continued for about two minutes. Sufficient care should be taken to prevent the stain from dripping or from flowing to the other end of the slide and soiling the fingers. The excess of the stain is rinsed off in water and the dye then removed from the other bacteria by washing with:

Acid Alcohol—

Hydrochloric acid, C. P., ...	3 parts;
70 per cent. alcohol, ...	97 parts.

As soon as the film becomes almost entirely free from the red color, it is rinsed in water and the following contrast stain poured upon it:

Loeffler's Alkaline Methylene Blue—

Saturated alcoholic solution of methylene blue, ...	30 parts;
1 to 10,000 watery solution of caustic potash, ...	70 parts.

This is permitted to act about one-half minute, if cold, or one-fourth minute, if warmed, after which the preparation is washed in water and then dried,

When thoroughly dry, you may apply a drop of cedar oil to the smear and examine at once, without a cover glass, under the oil immersion lens. If you have not an oil immersion lens, or if a permanent mount is desired, instead of cedar oil a drop of Canada balsam should be placed upon the stained film and a clean, thin (No. 1) cover glass superimposed. The entire process is more simple and requires less time than this rather lengthy description might suggest. Thus, after you acquire some expertness, the time required for the various steps may be about as follows: (1) Spreading and drying, ¾ minute; (2) fixing, ¼ minute; (3) staining, 2 minutes; (4) washing, $^1/_6$ minute; (5) decolorizing, ¼ minute; (6) washing, $^1/_6$ minute; (7) counter staining, ½ minute; (8) washing, $^1/_6$ minute; (9) drying, ¾ minute. The entire process, therefore, may be completed by the expert within five minutes, but carefulness should never be sacrificed in the endeavor to save time.[1]

In examining the tubercle bacillus high magnification and good illumination are essential. The organism measures about 2μ ($^1/_{12500}$ in.) in length, while its breadth is only about one-seventh as great. Nearly four tubercle bacilli of average size placed end to end would, therefore, be required to reach across a single red blood corpuscle. From this comparison, it will be evident that even with our greatest magnification these organisms are very small objects. While they may be seen by the aid of a $^1/_5$ inch objective of good defining power, especially when a substage condenser is also used, they appear as such extremely minute rods that a $^1/_{10}$ or $^1/_{12}$ inch oil immersion is an essential for the more careful work. The novice, in particular, will find it difficult to find the bacilli with objectives under $^1/_{10}$ inch. The light condenser should be so arranged so as to afford brilliant illumination, for it is upon the brightly lighted field that the deeply stained bacilli stand out most distinctly. In preparations stained as directed the tubercle bacillus shows the following characteristics: (*a*) It is a minute, rod-like body with rounded ends, and usually shows a slight curve. Its protoplasm often appears beaded or broken up into minute stained segments, and occasionally little knob-like projections, from the side of the organism, are seen. (*b*) It is stained a decided dark red color; other bacteria are blue, and are usually less intensely stained. (*c*) Although often seen singly, it is also seen in small groups of from two to six individuals. The bacilli frequently lie parallel or somewhat diagonally to one another, forming ||, × or V like figures. No bacillus should be considered that does not show the characteristic form and staining. Occasionally quite a prolonged search is necessary in order to find the tubercle bacilli. If not found at first, it is advisable to make repeated examinations of the same and other speci-

[1] As it is not essential, the counter staining may be omitted. It enables one, however, to see the associated bacteria, leucocytes and tissue cells, and produces a stained field which is helpful in focusing.

mens of the sputum. While it is the rule to find the organisms in the sputum of pulmonary tuberculosis, a failure to find them, of course, does not negative the disease. Upon the other hand, a diagnosis should not be made from the presence of but a single suggestive-looking organism, nor may one accurately judge the extent of the tuberculous process from the number of bacilli found.

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NEUROSAL CONDITIONS INVOLVING EXCESSIVE SECRETION OF THE GASTRIC JUICE (HYPERCHLORHYDRIA, HYPERCHYLIA, GASTROXYNSIS, REICHMANN'S DISEASE, ETC.).

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In discussing chronic sthenic gastritis in the August and September numbers of the International, I touched incidentally upon simple hyperchlorhydria, a condition which is supposed to be neurosal merely. It is often impracticable for even an expert to diagnosticate between a case of marked hyperchlorhydria and incipient or mild acid gastritis, and the treatment of the two affections is the same precisely, except that lavage, which is probably indispensable in advanced cases of the inflammatory affection, is not necessary in the simple neurosis.

For the sake, however, of completeness in this series, and because gastroxynsis and Reichmann's disease, which have not been hitherto considered by me, are somewhat important, I have decided to devote a brief separate talk to this group of affections.

Keeping in mind the essentially practical character sought to be given to the instruction herein imparted, I shall avoid disputed questions and the citation of many authorities, even at the risk of being considered dogmatic; but anyone desirous of delving more deeply into these subjects will naturally obtain some one of the numerous complete treatises upon them now accessible even in English.

It is my own opinion, based upon a considerable experience, that there rarely occurs a long continuance of an excessive secretion of the gastric juice from whatever cause, without exciting some proliferation of the secretory glands.

Symptomatology.—Simple hyperchlorhydria presents the symptoms already described under "Chronic Sthenic Gastritis" in our August issue. If they have not lasted long, it may be inferred that they result probably from

a merely functional derangement. If they have existed either persistently or intermittently for years, or even many months, there may well be a strong suspicion of cell proliferation, and it may then be expected that the disease will not yield easily or quickly.

You will see scores of cases in which hyperchlorhydria or an excessive secretion of HCl during digestion is a fairly constant condition, with or without acid gastric catarrh, for every case encountered of the other forms of hypersecretion above mentioned. In gastroxynsis, or gastrosuccorrhea chronica periodica, which is admitted by most observers to be rare, there are sudden and severe attacks of nausea, vomiting and gastric pain, in which quantities of fluid mixed with mucus and sometimes bile are brought up, showing a large excess of hydrochloric acid, and accompanied usually by headache, which may be intense, and by depression or prostration. The attacks come on suddenly, most frequently in the night, and last one or several days. They recur at varying intervals, sometimes as often as once a week, though rarely so often, and sometimes they are a year or more apart. Between them the patient may enjoy apparent health, though often a considerable excess of hydrochloric acid will be found in the stomach during the digestive periods.

This disease affects especially brain workers and excitable persons, as do all the forms of hydrochloric excess, and seems due often to excessive or prolonged mental strain.

The continuous hypersecretion or Reichmann's disease, often called also gastrosuccorrhea chronica continua, is exceedingly rare as a pure neurosis, most of the supposed cases probably being a result of an obstructed pylorus and gastric dilatation. The symptoms are those of hyperchlorhydria, except that they persist during the intervals between the digestive periods—that is, not only when there is food in the stomach, but also when there is not. Considerable fluid containing the elements of the gastric juice can be found in the stomach in the morning fasting and not mixed with remains of food, even when the stomach has been washed out thoroughly the preceding evening. There is also more likely to be gastric pain and vomiting than in simple hydrochloric acid excess. Marked nervousness, with usually constipation, and most commonly insomnia, are further symptoms of importance.

Differential Diagnosis of the Forms of Hypersecretion.—This must turn almost entirely upon the chemical and microscopic examinations of the stomach contents. When an abnormally high percentage of hydrochloric acid is present during digestion only and, besides an absence of any considerable amount of mucus of gastric origin, there is an absence also of cell elements coming from the gastric mucous membrane and showing proliferation, the case is one of hyperchlorhydria, probably without any gastric catarrh. When there are the same findings at all times of the day, in the morning fasting as well as at other times, and there is no dilatation

or other organic disease, the trouble is most likely to be Reichmann's disease. When the symptoms and signs of hydrochloric acid excess come on periodically and with violence, yielding to treatment in a day or in two or three days, and leaving the patient between times either well or with only a moderate hyperchlorhydria, the trouble may be set down as gastroxynsis.

The diagnosis from gastric ulcer is not always easy. Indeed, it is rarely possible to exclude ulcer positively in any case of painful indigestion, especially with an excessive or normal percentage of hydrochloric acid. But in most cases of ulcer there are markedly sensitive spots over the epigastric region—usually near the ensiform process—and very often at the left of the spine near the origin of the eleventh and twelfth ribs. Even moderate pressure upon these spots elicits decided pain. Then hemorrhage from the stomach, shown either by the vomiting of altered blood or passing the same with the stools (coffee-ground vomit or stools), occurs in at least four-fifths of all cases of ulcer, and not in the uncomplicated forms of supersecretion. The pain is more severe and longer lasting usually in ulcer, and is aggravated, never relieved, by food.

Let me guard you against one mistake, which is often made by good clinicians and by some even who consider themselves stomach specialists—that is, relying upon Congo red paper in testing for free HCl. Congo red is changed decidedly in color to a bluish tint by any kind of free acid, even by organic acids, especially if present in considerable amount, though the change is to a more pronounced blue in the presence of free hydrochloric acid. It is wholly unreliable except as an evidence that some form of free acid is in the stomach contents. There are other almost equally convenient tests for hydrochloric acid, which are always reliable—especially the phloroglucin-vanillin or Güentzburg test.

The *Prognosis* is rather better in all of these forms of hypersecretion than in those complicated with a catarrhal process. Still the severer cases are always rather stubborn and are very liable to relapse.

Treatment.—I can add very little to the measures previously advised for the major affection. In gastroxynsis no food should be given the first day and after that feeding should be resumed very cautiously and tentatively with spoonful doses of milk and lime water or beef juice, white of egg and such predigested aliments as Somatose powder with milk or the Somatose biscuits, Bovinine (one or two teaspoonsful in a wineglassful of milk or water), and Eskay's Food with milk. After a day or two of small feedings with one or more of these every two hours, the diet may be gradually enlarged to that prescribed in a former talk for chronic sthenic gastritis, which is the same as that suitable for simple hyperchlorhydria, as well as for Reichmann's disease.

During an attack of gastroxynsis the patient should be kept in bed and a partial rest treatment (rarely complete and continuous rest, unless the pa-

tient be a hysterical woman) is often helpful during the first month or so of the management of other severe cases of hypersecretion. Rest on the back a part of every day, with massage, Swedish movements and electricity, is often very advantageous, but a complete rest from mental occupation and from sexual excitement is still more important. Changes of climate and gentle, never excessive, out-door exercise are exceedingly useful.

In simple hyperchlorhydria and in gastroxynsis lavage and intragastric electricity are not often necessary, but in Reichmann's disease they may both prove very useful—indeed more so than anything else.

The medicinal remedies advised for acid gastric catarrh act equally well usually in the nervous forms of excessive secretion. In gastroxynsis, of course, they are applicable especially during the intervals between the attacks. In Reichmann's disease, it is important to push the treatment somewhat energetically and atropin in fairly full doses often needs to be administered, but it should not be forgotten that when the remedy is carried to the point of drying the mouth, it is very desirable to give some active diastasic preparation with or near the meals—preferably the Taka Diastase. Nitrate of silver is another remedy which should be remembered, both for its tonic action on the central nervous system and for the gastric mucous membrane.

Alkalies and alkaline spring water, especially Carlsbad and Bedford, can be employed helpfully if carefully watched and stopped in time. Hyperacidity is not the same as hydrochloric acid excess. Before leaving this subject, I desire to impress upon you a few words of caution:

A relic of the old days, when all of us had to guess at the probable character of the contents of our patients' stomachs, is the ambiguous and very mischievous word hyperacidity. The term acid dyspepsia has also come down to us from the same hazy pre-scientific period. Some writers, unfortunately, still designate indigestion with hydrochloric acid excess as acid dyspepsia, and refer to hyperchlorhydria as hyperacidity. This is a vagueness which has caused much very bad therapeutics.

An excess of organic acids, such as lactic, acetic, butyric, etc., often produces a marked and painful acidity of the stomach contents with very injurious results to the intestinal digestion as well as to the intestinal mucous membrane and the nervous system. Even spasm of the pylorus and dilatation may probably be results of this form of acidity. Such a hyperacidity is caused by an exactly opposite condition to that found in hydrochloric acid excess—that is a condition of debility or more or less complete atrophy of the gastric glands which results in a deficiency or even total absence of secretion of the gastric juice. To treat this markedly asthenic condition by alkalies and other remedies designed to diminish the activity of the glandular structures of the stomach would naturally lead in the end to a disastrous aggravation of the disease and all its symptoms; yet this is frequently done

by men who do not analyze the gastric contents of their patients, on the supposition that the vomiting or gulping up of intensely sour ingesta signifies hyperacidity or acid dyspepsia, and that these always demand an alkaline treatment.

In such cases, when the vomited ingesta are sour from an excess of organic acids with absence or a deficiency of hydrochloric acid and pepsin, an exactly contrary line of treatment is usually required—to wit, the administration of these deficient elements of the gastric juice as medicines together with roborant treatment generally.

Guaiacol Carbonate and Creasote Carbonate in Bronchitis and Pneumonia. The attention of the profession is again called to the use of guaiacol carbonate and creasote carbonate. Dr. Hülscher published an article in the *Berliner Klinishe Wochenschrift* in 1891, Chanusier contributed to this knowledge in *The Lancet* in 1898, and further observations are reported upon by Saifert in *The Lancet* in the September number of this year. These observers agree that the favorable action of duotal and creasotal is not limited to chronic, but that they may be also used in acute, affections of the lungs. Dr. Casserite's method consists in the administration of very large doses of creasotal, and as a result the temperature usually falls in 24 hours, after which time the dose may be somewhat reduced without danger from relapses and sequelae. Creasotal is a powerful antiseptic without unpleasant or dangerous properties. Under its use in mild cases of bronchitis and broncho-pneumonia, the temperature falls at once; the chest sounds become clear and the patient improves rapidly. In the more severe forms of pneumonia and broncho-pneumonia when the infection is virulent, the temperature may be a little irregular until defervescence is established. In pseudo-lobar-broncho-pneumonia the fall in temperature is very early, while in chronic with extensive hepatization there may be no reaction whatever. By the use of creasotal it is claimed that the infectious sequelae, and tuberculosis, gangrene, cardiac and renal affections, become very rare. Dr. Casserite prescribes for adults 5 gms. to be taken morning and night in a cup of hot milk; for children one year and under, 0.25-1 gm.; from 1-4 years of age, 1-3 gms.; from 4-6 years of age, 3-4 gms.; from 6-10 years of age, 4-5 gms. Personal experiments showed that the reduction in temperature was not accidental, though a slight, remittent type of fever may be seen in the broncho-pneumonia type. In catarrhal bronchitis its action is rapid, and in the first stage of pneumonia, bronchial respiration, rales, etc., quickly disappear. Small doses are to be taken for some time after apparent recovery; relapses are quite uncommon. Under the use of this drug the patient is prevented from infection of tuberculosis; the stomach is not disturbed, cardiac affections or albuminuria do not contraindicate the use of the drug. With regard to the dose, it seems exceedingly large, and we would, therefore, recommend about one-half the quantity given at shorter intervals, and increased rather rapidly; but, at the same time, the patient should be kept under careful supervision.

SOCIETY TRANSACTIONS.

NEW YORK DERMATOLOGICAL SOCIETY, SEPTEMBER 26, 1899.

JAMES C. JOHNSTON, M.D., PRESIDENT.

Epithelioma of the Lower Lip.—Dr. Charles W. Allen presented the case of Mr. C——, sixty-four years of age, a watchman by occupation, who, seven years ago, had had a sore on the left side of the lower lip. It had been called a wart, but had disappeared under treatment. It had returned, however, three months ago. When first seen, on September 2nd, there was no doubt about the diagnosis of epithelioma. There were evidences of rather rapid extension inward, and a second wart-like growth had appeared alongside the first. The man had been told by several surgeons that an extensive cutting operation was required, but to this he objected. Dr. Allen had, therefore, applied arsenical paste, and had repeated this application once. Since then it had been dressed with an aristol ointment.

Dr. A. R. Robinson remarked that it was too early to judge of the effect of the treatment, but it is probably satisfactory. The nodule present was too small to allow of any definite deductions as to its nature. It may have nothing to do with the epithelioma on the lip.

Dr. Daniel Lewis took the same view regarding the effect of the treatment. He said there was always more or less inflammatory infiltration for five or six weeks after the application of arsenical paste. As a general rule, he would not advocate treating epithelioma of the lip with the paste, believing that operation was ordinarily much more satisfactory.

Dr. George T. Elliot said that there were two very suspicious lymphatic nodules under the jaw. They were too sharply defined and distinct to be simple inflammatory nodules. The site of the epithelioma presented an appearance which also seemed to him to indicate that there was still epitheliomatous tissue present.

Dr. Allen asked for an expression of opinion as to whether the man's chances had been made worse by reason of such treatment.

Dr. Lewis replied that he did not believe that the application of the paste ever made subsequent operation more formidable or tended to promote recurrence or produce any mischief whatever. The only doubt in his mind regarding the case was whether that gland had been present before the first application; if so, it should have been removed at the time.

Dr. Robinson said that usually treatment by any caustic which was not promptly effectual and complete made the condition worse, for the reason that more blood was brought to the part, the lymph channels were enlarged,

proliferation was more active, and, hence, there was greater tendency to secondary infection.

Dr. Lewis explained that he had referred only to an actual escharotic, like arsenical paste. He agreed with Dr. Robinson that the action of mild caustics, such as nitrate of silver, carbolic acid, etc., often promoted the infiltration of adjacent tissues with cancer elements.

Keratosis of the Lip—Pre-cancerous (?)—Dr. Allen also presented David K——, twenty-four years of age, married, a tailor, father of one child. He had never had any venereal disease, he said, and there was nothing in the history or examination to indicate syphilitic infection. In spite of this he had been placed on an antisyphilitic course, as a test, but without any appreciable effect on the sore upon the lip. On June 24th, when first seen, the condition had existed for six weeks. It had begun as a fissure, which bled at times. It increased in size, and became a hardened patch, alternately white and blackish, as the patient expressed it. In the center of the patch was a rather deep fissure, painful at times. After softening it by the use of salicylic soap plaster, it had been repeatedly cauterized with trichloracetic acid, but with very slight effect. The verrucous margin on the inner side is now nearly flat from the burnings. The patient seemed to be rather young for epithelioma to develop.

Dr. J. A. Fordyce thought it might be a precancerous keratosis. It was doubtful whether there was yet any true epithelioma, although he thought there would be, in time, if the case were let alone.

Dr. G. H. Fox said that the case was one which would almost certainly become an epithelioma, and, therefore, it should be treated as such. He thought there was an erroneous opinion held by the profession in general about epithelioma occurring almost exclusively after the age of forty years. He had seen similar cases of epitheliomatous keratosis of the lip in persons of the same age as this man, and he has seen superficial epithelioma of the face in subjects as young as twenty-five.

Dr. Klotz mentioned that a number of cases of epithelioma had been published occurring in children, referring particularly to one case reported by Dr. Hartzell. (*N. Y. Med. Jour.*, 1898, LXVII., 311.)

Dr. Henry H. Whitehouse agreed with the remarks of Dr. Fox.

Dr. Elliot believed that the physicians who would make a diagnosis of syphilis in such cases simply because the patient was below forty, would likewise err in diagnosis if the same condition were seen by them in a person over forty years of age.

Dr. Fox replied that he had known very good surgeons to make an erroneous diagnosis simply because of the youth of the subject.

Dr. J. C. Johnston remarked that the question of diagnosis in the case

under discussion could be very easily settled by a miscroscopical examination.

Dr. Robinson asked if those present had seen many cases of epithelioma in persons under the age of thirty. In his experience, cutaneous epithelioma was rather rare before the age of thirty years.

Dr. Sherwell remarked that its occurrence in such young persons had been very rare in his experience also. He had seen cancer of the lip only twice in men of twenty-five.

Dr. Fox said that he would admit that such cases were rare, but the exceptions were so numerous that it was misleading to state, as the text-books did, that epithelioma almost never occurred under the age of forty.

Dr. Allen remarked that he intended to subject the case to microscopical examination, and would report upon it.

Xeroderma Pigmentosum.—Dr. Bronson presented a patient with the following history: The patient was a girl, eight years of age, of sturdy, well-nourished appearance, but rather small for her age. Her mother stated that when the child was about four months old she noticed a decided disposition to redness of the face, especially across the bridge of the nose and beneath the eyes. Whenever she had been exposed to the sun the face would become swollen and red as if from sunburn, the effects of which would last for several days. Later on there was a tendency for blisters to form after such exposures, which were attended with considerable soreness and would last for a week or ten days. About four years ago the mother first noticed that the face and hands were much freckled, and at this time also warts began to appear on the face. There was never any excoriation nor discharge except at the time when the blisters occurred. There has never been any considerable itching. The spot of melanoderma on the temple first appeared about two years ago.

On examination, the face, especially over the cheeks, nose, and chin, looked rough and scaly, and at first glance suggested eczema. On closer inspection it was seen that there were numerous warty elevations upon the cheeks and about the *alae nasi*, abundant freckles and in between a multitude of shallow, depressed, smooth or slightly puckered scars. Underneath the eyes the scars are flatter, larger and have a glazed look, and there is some ectropion, especially of left eyelid. On the right temple was a deeply pigmented spot the size of a finger-nail. Here and there little telangiectases, not numerous, some as large as pinheads and of bright red color, disappearing on pressure; others of arachnoid character, but very small. On the hands the conditions are similar. There are numerous freckles on backs of hands and wrists, few scars and but faint signs of telangiectasis. There are a number of warts here, but partaking more of the character of verrucæ

vulgares, and much denser than those in the face. Some of the warts on the face had been removed.

Dr. Bronson said that there seemed to be a closer relation between the

changes that had taken place and some previous inflammation. According to the history given at first, there was only a peculiar susceptibility to exposure to heat, particularly from the sun, with the effect of producing not only erythema but blisters, even when the exposure was apparently incon-

siderable. Even now the face always becomes worse upon exposure to the sun. It was evident, however, that the chief factor could not be light, inasmuch as parts not exposed were also affected, as on the chest and arms. It has been stated that the disease rarely extends below the nipples, but it yet occurs on parts usually covered.

It did not seem to him that the changes corresponded to those in senile degeneration, for the lesions were more or less circumscribed or discrete and each apparently represented a previous inflammatory lesion. He referred to a letter recently received from Dr. Bowen, of Boston, under whose charge the case had formerly been. Dr. Bowen stated that when he saw the case some three years ago, there was an acute vesicular outbreak on face and hands following exposure to the sun, and the disease hydro æstivale was suggested, though subsequently he also regarded it as xeroderma pigmentosum. At one time (in 1896) he had removed a small nodule from the conjunction of one eye, which, on microscopic examinations, proved to be epitheliomatous.

Dr. P. A. Morrow concurred unqualifiedly in the diagnosis. It was a very typical example of the disease, and was the first case of the kind that had come under his own examination.

Dr. Robinson also accepted the diagnosis given.

Dr. Fordyce thought that Mr. Jonathan Hutchinson's designation of this as "premature senility" of the skin was a very apt one.

Dr. Johnston thought the case illustrated very beautifully one etiological factor, *i.e.*, the effect of light on the skin. He had seen three of these cases, and in each of them the disease had stopped at the line of the clothing. Last summer, at Edinburgh, two cases had been presented at the Royal Infirmary. One of these patients, a girl, wore out-doors in the daytime a brown tissue veil, and her skin was thickly smeared with an ointment containing a brown pigment. For a long time these measures had served to control the spread of the disease, the chemical rays of light being excluded. The girl was in fair condition.

Dr. Morrow said that it seemed to him a question as to whether the etiological factor referred to was really responsible for the condition. Certain diseases, it was well-known, had a preference for certain localities, and this was determined by certain peculiarities of anatomical structure. In the case cited the improvement might have been due to the effect of local treatment.

Dr. Elliot remarked that Riehl had presented a case in which the disease had not developed until the age of sixty years, so it hardly seemed probable that light had anything to do with the origin of the process.

Dr. Bronson said that there seemed to be a close relation between the changes and the inflammation. According to the history in this case, there had been at first only a peculiar susceptibility to light, particularly sunlight. In addition to this, blisters had been produced. Even now the face

was much worse upon exposure to light. It was evident, however, that light was not the only factor. As a rule, the pigmentation did not extend below the region of the nipple; the upper part of the chest was habitually covered. The condition did not seem to him to correspond accurately to the changes of senility, for the efflorescences seemed to be quite limited in area. Each one seemed to represent an antecedent inflammatory lesion. Subsequently there were atrophy and the formation of warts. In the note from Dr. Bowen he stated that there had been an acute vesicular outbreak. After having watched the case for a time he had come to the conclusion that it was one of xeroderma pigmentosum. An epitheliomatous nodule had been excised from the eye. This early occurrence of epithelioma seemed to the speaker of special interest.

Acnitis.—Dr. C. W. Allen presented a woman with a peculiar eruption on the arms, similar to some cases that had been previously presented to the society, one by himself. It was a suppurative process leaving pitting like acne varioliformis.

Dr. Fordyce thought the case was a fairly typical one. The lesions seemed to be more superficially situated than in some of the cases of this kind. The atrophy and scar formation were certainly very characteristic.

Dr. Elliot thought a much better name for this condition was hydradenitis. The woman was certainly not a tubercular subject, yet from the description given of tuberculides and of paratubercular lesions it would seem that this should be a case of that class. He would like to hear from Dr. Johnston on this subject.

Dr. Johnston said that he had carefully studied four or five of these cases. The clinical appearance had been nearly the same in all. The term in general use is hydradenitis, but it might occur absolutely independently of all the skin appendages, so that some other term should be found to describe the condition more accurately. The process was undoubtedly a granuloma. The necrosis was such a marked feature in these cases that the term "necrotic granuloma" seemed to him especially descriptive. In his opinion, all granulomata were due to some kind of poisoning. All of these cases did not, by any means, occur in tuberculous subjects; Dr. Allen had reported a case in point, occurring in a perfectly healthy subject. Nevertheless, of the cases that he had collected and reported, 56 per cent. had occurred in tuberculous subjects.

Scleroderma.—Dr. George T. Elliot presented a case of scleroderma which had begun twelve years ago. The patient had been first seen ten years previously, at which time she had been engaged in typewriting. The disease had appeared first on the tips of the fingers, and had then ex-

tended up on to the wrists and arms, and had finally appeared on the face. He presented the case on account of the sclerodactylie existing and especially for the reason that though the terminal phalanges were greatly shortened, still the joint was very slightly affected and the phalanx could still be flexed and extended to a considerable degree.

Dr. Morrow said that the pathological basis of these changes had not been very definitely determined. These cases certainly resembled clinically certain changes met with in leprosy, but he did not accept the theory that it was really a form of leprosy. The changes apparent in other parts of the body had interested him, particularly as he understood that the sclerodermatous patches on the face had improved.

Dr. Elliot said that ten years ago she had been treated for a time by hot water and massage. He had not seen her for fully nine years, during which time she had received no treatment, yet there had been a decided improvement in the disease as a whole.

Dr. Bronson asked how often a relation between this condition and a general marasmus was found. He only recalled one case of sclerodactylie—a very much more marked one than that just presented—and it had been associated with a marked marasmus.

Dr. Allen said that this was the first case he remembered in which the terminal phalanges were so implicated, and yet the mobility of the joint was preserved. He recalled a case in which the fingers tapered very markedly and the nails were only about one-eighth of an inch in length. The skin of the face was very tense, giving a mummified appearance to the countenance.

Dr. Fox said that he had shown two cases to the society in which the term scleroderma had been used. The skin was hidebound and hard, but the disease seemed to him primarily of nervous origin. In one of the cases he had presented there had been the same glossy condition of the fingers and shortening of the finger nails, but with this a clubbed condition of the terminal phalanges. He had seen just such a case a few days ago associated with atrophy of the face. Last spring he had presented a boy with marked wasting of the subcutaneous tissues, but the skin itself did not seem to be affected, although it had been more or less hardened in places. We must recognize, therefore, that under the term scleroderma are included several distinct pathological conditions, some of which do not primarily affect the skin.

Dr. Klotz called attention to the similarity of the case with one presented by him before the Society last winter. It was difficult to estimate the effect of treatment in such cases during the milder season, because as a rule they exhibit marked improvement and generally do better in warmer weather. Although his patient was not in perfect health, she certainly did not show any signs of a state of marasmus. She had been treated with thyroid tablets for several months, apparently without the slightest benefit.

Dr. Sherwell said that his case, referred to by Dr. Fox, had shown progressive loss of fat and subcutaneous tissue, the skin itself not being especially affected, but being firmly attached to the aponeuroses of the muscles, doubtless the muscles were somewhat atrophied, but not so much as to affect movement or function. He also believed in its neurotic causation.

Dr. Elliot said that in the symptomatology of scleroderma, in general, it had been observed that the muscles and aponeuroses would be affected, and that these people often died of sclerosis of the internal organs; hence, in the terminal stages it was not surprising to have marasmus.

Keratosis of the Palm.—Dr. Allen presented a physician with keratosis which had existed for thirteen years. At times, little sago-grain nodules appeared, which were softened by the application of salicylic acid ointment, and cut out.

Dr. Fordyce said that the underlying condition was usually a hyperemia or dilatation of the vessels; the keratosis itself could be relieved without much difficulty, but was apt to recur.

Dr. Bronson said that about all that could be done was to get rid of the hypertrophy of the epidermis, but this was quite important.

Dr. Klotz thought that these conditions were always more or less congenital. Some of them were associated with hyperidrosis, while in other cases visible perspiration was entirely absent. He had had this patient under his observation for a short time several years ago, while he was serving on the house staff of a hospital. While he was engaged in original work, the condition became decidedly worse, and little progress was made with the treatment. He then had used the salicylic acid soap plaster with some temporary benefit, particularly as regards the fissures. He had several times seen good results from the internal use of pilocarpin in cases not associated with hyperidrosis; in one which he had published in 1890, great improvement had been obtained, which lasted for at least six months after treatment had been stopped.

Dr. Allen said that he was of the opinion that the keratosis in this case was the result of taking arsenic. Up to the age of thirteen years the patient had been entirely free from anything of the kind. He had then taken for a long time as a medicine large doses of arsenic. The speaker said he believed this was the explanation of the keratosis, although it was difficult to understand why the manifestations persisted so many years, but we know that, in some instances, they did so persist.

Dr. Morrow said he doubted if any such effect from any drug would persist for so many years. Keratosis might be produced by arsenic, but he was of the opinion that it disappeared soon after the discontinuance of the drug.—*Journal of Cutaneous and Genito-Urinary Diseases.*

REVIEW OF MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE GENERALLY.

UNDER THE CHARGE OF

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The Etiology and Prophylaxis of Scurvy. A special correspondent of *The Lancet* (Oct. 14, 1899), writing from Russia, quotes from a series of articles written by the late Dr. Iskerski, who had devoted many years to the study of scurvy. Dr. Iskerski believed it to be due to a special poison generated in stale or spoiled flour, and capable of retaining its activity even after the flour has been made into bread or biscuits. This view had forced itself upon him after observing that some of the Russian tribes, though living under the most unhygienic conditions climatically, and surrounded by filth, but living solely on animal food, did not contract scurvy, while it broke out among some of the finest of the Russian troops, in spite of the fact that they enjoyed a most liberal diet, rich in albumens, fats, starch, salts and vegetable acids. It seems that this disease is only found in races or people who consume food made from either wheat or rye flour, while among those who use maize or rice, as in Roumania and Japan, it is not met with. The symptoms of scurvy suggest rather a chemical than a bacterial poison as the cause. It is certainly not a climatic or soil disease. Pellagra is the disease most resembling it. Dr. Iskerski dwells specially on anemia and hemeralopia—night blindness—as symptoms of this malady. If his contentions are true, the remedy is clear—flour should not be stored for any great length of time, and even then it should be placed in well ventilated, specially adapted rooms.

An Epidemic of Typhoid Fever in Oberbipp: A Contribution to the Etiology and Hematology of "Typhus Abdominalis." Naegeli (*Corres. blatt f. Schw. Aerzte,* No. 18, Sept. 15, 1899) reports an endemic of typhoid fever which broke out in March, 1899, in the almshouse at Oberbipp, many individuals being attacked within a few days of one another. Some were of an extremely mild type and ordinarily would not have been recognized clinically, others were more or less severe. The character of the onset in so many at almost the same time suggested the pos-

sibility of ptomain poisoning, but the clinical course, the Widal reaction and in some the necropsy, settled beyond a doubt the true nature of the malady. The water supply was examined with negative result. It was then elicited that the general utility man of the place, whose duties were in part to milk the cows, had suffered several weeks before from the disease in its ambulatory form. He had recovered before the outbreak, but a couple of months later the Widal reaction was positive, and an examination of his blood showed the following: Neutrophile, 76½%; lymphocytes, 15%; transition fornix, 5½%; eosinophile, 2½%. The author believes the differential count will prove to be a valuable diagnostic aid in recognizing typhoid fever, especially those latent or abortive cases in which one fails to get the Widal reaction, and as the blood changes remain some weeks or, in children, even a few months, before the normal relation is again reached, it may be of value later, as the above case demonstrates. The milker, then, having undoubtedly had the disease, it is not difficult to see the probable cause of the endemic, for though the milk in the institution was boiled, it is scarcely likely that every drop of milk was poured out, and the dregs served to recontaminate the milk when it was replaced in the cans. Naegeli then puts 3 questions as follows: (1) Do the abortive and most mild cases of typhoid yield the Widal reaction? (2) Is the differential leucocyte count of clinical value, and, if so, has it the same or better results in abortive and mild cases than the Widal reaction? (3) Can typhoid be absolutely diagnosed by either one or both of the foregoing methods, when they do not present a trace of the disease clinically?

He gives the following answers: (1) The serum reaction is found not only in abortive and ambulatory cases, but also in those which clinically are completely latent. (2) The blood examination presents as much of value as the serum reaction; indeed, it may occur when the serum reaction fails. (3) The two modern methods show that the morbidity of an outbreak is much greater than previously supposed. (4) Both methods enable one to recognize the previous existence of the disease in those who have recovered, and the blood examination often enables one to approximate the time of the attack; but the latter remains at most a few months, while the serum reaction lasts for years. As to the method of performing the serum reaction, he thinks the dilution usually employed is not high enough. He takes the clear serum and makes dilutions of from $^1/_{10}$ to $^1/_{200}$ with a 10 hour, cloudy, actively motile typhoid growth in bouillon, and then studies a drop under the microscope. Clumping and cessation of movement are requisites for a positive diagnosis. The blood changes are briefly as follows: Neutrophiles decrease in number in the first stage of the disease (rising temp.) to about a half, fall in the second stage (continued fever); third, stadium (remission), still further reduction, reaching the maximum loss in the defervescence. In the convalescence they begin to assume their proper number, but that only obtains after some weeks. In relapses the same is true, just as in the original affection, while complications, such as parotitis, cystitis, otitis manifest themselves quite early, even before physical signs justify the making of a diagnosis. Not less valuable are the variations in number of the

lymphocytes, first and second stages, considerable diminution. After the second stage, they begin to increase till an excess is present and this is preserved for some time after convalescence. Eosinophile cells are lessened at the onset of the disease; indeed, almost disappear in stages 1 and 2. The reappearance of these cells is of favorable prognostic import. From the above it is evident that the blood examination then may be of value in those cases where the serum reaction fails.

Bronchiolectasis: Ulcerative Broncho-Pneumonia; or Honeycomb Lung. Buchanan (*Liverpool Med.-Ch. Jour.*, July, 1899) reports a case of this interesting condition. It is most common in young children. It clinically resembles capillary bronchitis, but the physical signs in the lungs vary from day to day more than in that disease. The honeycomb lung is brought about by an inflammatory process in the alveoli, which causes more or less dissolution of the latter, with consequent cavity formation. Some of the vomicae directly communicate with dilated bronchioles. In those cases which do not prove fatal, a great deal of fibrosis of the lung occurs, and such cases have at times been described as cases of fibrous phthisis. The relation of tuberculosis to this condition is not altogether clear, but it is likely that there is both a tuberculous and a non-tuberculous form.

DISEASES OF THE CHEST.

UNDER THE CHARGE OF

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On the Recognition of Enlargement of the Left Auricle by Percussion and on Other Clinical Uses of Dorsal Percussion. Ewart (*Brit. Med. Jour.*, Oct. 28, 1899) recalls the fact that the normal post-cordial dullness contains a smaller and more accentuated area of dullness, which is yielded by the left auricle. This smaller space, the "left auricular dullness," is a semilunar area, convex upward, including the eighth and ninth dorsal spines. It measures 3½ inches in the transverse and 2½ inches in the vertical diameter. In mitral stenosis of milder grades this area is enlarged particularly upward, in more advanced cases the whole post-cordial dullness is increased, but still within it the left-auricular dullness is found also enlarged. Aneurism may lead to error, and Piorry has

described a case of esophageal cancer that gave an area of dullness that might easily have been confused with that of the left auricle. The interscapular dullnesses are of great importance, and their position and extent are of the greatest positive and negative value. The first is indicated by a report of a cancer of the esophagus at the infratracheal level, which gave an increase in the normal relative dullness of the right interscapular region, and an area of dullness extending downward from the fourth dorsal vertebra on the right. Autopsy showed a cancer occupying the position indicated. The fifth dorsal vertebra is invariably dull, directly over it and a little more to the right of it than to the left ($\frac{2}{3}$ inch and $\frac{1}{3}$ inch respectively). If this area is increased, enlargements of the infratracheal glands is indicated, but E. thinks that the enlargement is usually more to the right than to the left.

The Immediate and Remote Effects of Athletics upon the Heart and Circulation. Stengel (*Amer. Jour. of Med. Sci.*, Nov., 1899) records the results of his observation upon the hearts of athletes for 6 years. He concludes that over-distention of the heart is frequent in athletic contests, and may do permanent harm if the individual is in ill health or badly trained. Hypertrophy and symptoms of over-action sometimes result from continued athletics. He finds that in athletes who have stopped exercise to a large extent there is often a continuous enlargement of the heart for some time afterwards. He thinks, with Allbut, that "second wind" is the recovery of the dilated right heart after preliminary over-distention and the consequent relief of the lungs. He does not agree, however, with the same author that the process is a harmless one; but says it is hardly conceivable that some damage is not done by such processes.

The Form of the Chest in Phthisis, and its Significance. Woods Hutchinson (*Brit. Med. Jour.*, Oct. 28, 1899) publishes the result of the measurements of the chests of 82 patients suffering from phthisis pulmonalis. The results show that in his series the tubercular chest, instead of being "flat," as usually described, is really rounder than normal. In the English series the average antero-posterior diameter was 8 inches, 4 inches above the normal; and the transverse diameter 10.1 inches, or one inch below the normal; and the breadth index 79.6. In the American cases the breadth index was 79.3. The normal breadth index he determines to be 71. The similarity in results in the two series is striking. He explains the discrepancy between the appearance of the tubercular chest and its actual shape by the fact that the true tubercular chest is rounded, and consequently the scapulae tend to roll forward, so that the front of the chest looks flat. This explains the appearance of the scapulae called "alar." The breadth index of the chest at 15 years of age is 80, and while it cannot be proven without long series of measurements and observations, Hutchinson suggests that the phthisical chest is one that has been arrested in development about that age, and that the pressure of the muscle and arms coming too far forward has hampered respiration and caused increased susceptibility to tuberculosis. The increase in length of such a chest is real and not ap-

parent, as shown by measurement. "The tubercular chest is not only relatively but absolutely deeper, narrower and longer than the normal." He suggests as a remedy exercises that will develop the great pectoral muscles and pull the chest into shape. A consideration of the comparative anatomy of the chest is appended.

DISEASES OF THE DIGESTIVE SYSTEM.

UNDER THE CHARGE OF

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Gastrosuccorrhea. Gerling (*Med. Rev.,* Vol. XXXIX., No. 8) reports a case of the above affection in which the prominent symptoms were an intense feeling of hunger which appeared at any time of the day, belching, pyrosis, severe pains in the stomach and back, frequently accompanied by nausea and vomiting. Appetite good, bowels constipated, gastric region not sensitive to pressure, urine rich in phosphates and at times of alkaline reaction. Examination of the stomach contents 7 hours after a Leube-Riegel test-dinner showed a total acidity of 50; free HCl, 0.18; peptones present. Examination of contents of fasting stomach on 5 occasions revealed the presence of about 180 c.c. of gastric juice. The author excluded gastric ulcer by the pain being present irrespective of food, absence of sensitiveness on pressure or hematemesis. Myasthenia was excluded by the absence of the splashing sound and the freedom of the contents from any particles of food. Dilatation of the stomach by the absence of fermentation and particles of food in the stomach-contents. The gastric crisis of tubes were excluded by the absence of other symptoms of tabes dorsalis. Hyperchlorhydria could not as easily be differentiated, although the lower degree of acidity and the fact that the condition of the patient was the same whether a proteid or vegetable diet was consumed, would point rather to gastrosuccorrhea as the cause. The treatment consisted in the administration of alkalies in combination with bismuth subnitrate and morphin and lavage. Patient improved.

On the Diagnosis of Cancer and Tuberculosis of the Cecum. Obrastzow (*Bolnitsh. Gaz. Bot.,* Vol. X., No. 32) reports one case of cancer and one of tuberculosis of the cecum, which form an addition to 2 cases of cancer and 5 of tuberculosis in the same region, reported in *Vratch,*

Nos. 27 and 28, 1898. Speaking of the differential diagnosis between the two affections, the author remarks that in cancer a tumor is palpated, while the intestine cannot be felt; in tuberculosis, on the other hand, the cecum is distinctly palpated, the walls are more or less uniformly infiltrated, presenting the phenomena of a chronic typhlitis, in this case tubercular. The finding of tubercle bacilli in the feces is of great importance. In the case reported by the author, tubercle bacilli were found in the first examination, while their presence could not be revealed on subsequent examinations. This, however, may also occur in the sputum, and the author, therefore, believes that the presence or absence of tubercle bacilli in the feces is of as much diagnostic value as is their presence or absence in the sputum. In the 8 cases in which an infiltration of the cecum and ileum was present, tubercle bacilli were also found. [The failure to find tubercle bacilli in the feces of patients suffering from intestinal tuberculosis may be due to the fact that the feces examined are in a liquid form, thus rendering the discovery of the bacilli extremely difficult, if not impossible. The method recently advised by Rosenblatt (see INTERNATIONAL MEDICAL MAGAZINE, Sept., 1899) obviates this difficulty.—ED.]

Esophagoscopy—Its Application in Two Cases. King (*New Orleans Med. and Surg. Jour.*, Oct., 1899) points out the usefulness of the esophagoscope in the inspection and treatment of the esophagus. By means of this instrument the entire mucous membrane, as far down as the cardia, can be seen, pathologic conditions recognized and foreign bodies removed. The instrument employed is one invented by Stoerck and consists of a long metal tube of various sizes and diameters. The light is reflected by means of a mirror. Its introduction is not difficult. The patient is made to lie supine upon a table with the head thrown back over the edge to straighten the spine and bring the mouth as nearly in line with the esophagus as possible; he is then directed to assist the passage of the tube by acts of swallowing. In some intractable cases an anesthetic may be necessary. By the aid of this tube the author was enabled in one case to diagnose malignant disease of the esophagus, and in another to assure the patient that the pin accidentally swallowed and felt in the esophagus was not there.

NEUROLOGY.

UNDER THE CHARGE OF

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A Critical Summary of Recent Literature Concerning Some Recently Described Reflexes. Sailer (*Amer. Jour. Med. Sci., Phila.*, Oct., 1899, Vol. CXVIII., p. 446) considers some of the recently described, or lately resurrected, cutaneous, muscular and tendinous phenomena. The hypo-

thenar reflex is obtained by pressure upon the pisiform bone, upon the flexor tendon of the ulnar side of hand, upon the little finger, and by passive abduction of the little finger. The result of such stimulation is the appearance of a fold on the ulnar side of the hand. This fold is due to contraction of certain small bundles of muscle fibers that arise from the edge of the palmar aponeurosis and it persists so long as pressure is maintained. The reflex is without known pathologic significance. Babinski's toe reflex consists in dorsal flexion of the toes, particularly of the great toe, when the plantar surface of the foot is irritated. Babinski claims that it is significant of a diseased condition of the pyramidal tracts and that it is valuable in differentiating hysterical and organic hemiplegia; his claim, however, is not accepted by all. Among the pupillary reflexes are the contraction associated with closure or attempted closure of the eye, and the so-called cortical or attention reflex. In the former the immobile and dilated pupil of general paresis is contracted by the effort of the patient to close the eyes against resistance. The theories offered in explanation of the phenomena observed are, first, a possible connection between the cells of the facial nucleus and those of the oculomotor nucleus; second, that innervation of the orbicularis palpebrarum is accompanied by irritation of the pupillary contracting center in the oculomotor center when the latter is so degenerated that ordinary impulses do not pass. A condition of exaggerated irritability of the smooth muscle fibers may also exist. A modification of this reflex is the temporary persistence of contraction when a patient with immobile pupils closes the eyes and then opens them. Contraction is more vigorous if the patient fixes some object and attempts to close the eye against resistance. This modification is not always significant of disease. The cortical reflex described by Piltz proves the influence of the activity of the higher psychical centers upon the pupil. The method of testing is as follows: The patient, placed in a moderately illuminated room, fixes a point on the opposite wall, and, without changing the fixation point, turns his attention upon first a bright object and then upon a dark object in the periphery of his visual field. Directing attention to the bright object causes narrowing of the pupils, and widening takes place when attention is put upon the dark object. The same reaction is observed when the objects are imaginary. That the reaction is not due to circulatory disturbance was experimentally proven.

Alexander Bruce (*Scot. Med. and Surg. Jour.*, Vol. V., No. 3) made a diagnosis of cerebellar tumor in a case in which the chief symptoms were suddenly developing deafness of the left ear, a tendency to fall toward the left, ataxia of the limbs, vomiting, left-sided occipital and parietal headache, tenderness on tapping the left side of the skull, dimness of vision, a condition of the disks which suggested a moderate degree of papillitis that had subsided into atrophy more complete in the right eye than in the left, slight nystagmic movements, and contraction of the visual fields. The nucleus of Deiters is connected with the cerebellum, with the semicircular canals, with the nucleus of the abducens nerve on the same side, with the

nucleus of the oculomotor nerve on each side, with the anterior cornu in the same side of the cord, and to some extent with that in the opposite side. Each nucleus of Deiters, when stimulated either from the cerebellum or the semicircular canals, may thus be expected to influence the movements of the same side of the body and the lateral deviation of the eyeballs to the same side; and in smaller degree the movements of the opposite side of the body. When the influence of Deiters' nucleus is removed on one side, and when the corresponding abducens nucleus functionates and both eyes are directed to this side, according to Bruce, the contraction will be unsteady and nystagmus will occur. When the corresponding arm is moved no paresis is seen, but the movement is unsteady. Bruce concludes that the tumor in his case must have compressed Deiters' nucleus. The left cerebellar hemisphere was exposed during an operation and a tumor was found but could not be removed. The patient died three days after the operation. At the necropsy a vascular fibrosarcomatous tumor of the size of a walnut was found in the situation diagnosed—in the posterior fossa of the skull, adherent to the dura and immediately behind the internal auditory meatus. It had its origin in the flocculus, and had involved the dura and petrous bone secondarily, and the nucleus of Deiters was evidently compressed. Bruce believes that in the now established connection of the nucleus of Deiters with the abducens nucleus and with the same side of the spinal cord, we have valuable data for the localization of cerebellar disease.

MEDICAL DISEASES OF THE KIDNEYS.

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Nephritis without Albuminuria. Jennings (*Med. Age,* Aug. 10, 1899) reports two cases of the above. In one the albuminuria was only found once (a trace), although repeated examinations were made. In the other it was only found twice, covering a long period of time. Both of these cases had numerous casts on repeated examinations. After reviewing the authorities on this subject, he deduces the following: (1) That very rarely chronic parenchymatous nephritis has been observed in which albumin and casts have been absent from the urine for certain periods of time. (2)

That chronic interstitial nephritis is characterized by a urine in which albumin and casts appear in smaller quantity, and that frequently both disappear for short or long periods of time. (3) That the appearance and disappearance of casts and albumin in nephritis are synchronous—in other words, that the pathologic changes that cause albuminura and cylinduria are identical. Simon particularly is emphatic on this point. The author does not agree with Simon, who states that the reason albuminuria is not found in these cases is because of the carelessness of analysis, and he says that this could not have happened in his two cases.

Preliminary Notes on the Prognosis of Nephritis. Cabot and White (*Boston Med. and Surg. Jour.*, Aug. 10, 1899), after studying 423 cases of diagnosed nephritis, came to the conclusion that there are a few cases of chronic nephritis that entirely recovered. They report two cases of this disease, one that has been absolutely free from any of the characteristic symptoms for the last six years, and another for the last three and one-half years. After looking over the literature on the subject, they found that the opinions of the various authorities differed widely, and came to the following conclusions: (1) Chronic nephritis is not an absolutely incurable disease. Recovery occurs in rare instances. (2) Chronic nephritis may exist for a long series of years without causing any apparent constitutional disturbance. (3) The average duration in 332 cases of chronic nephritis was 19 months. (4) Acute nephritis is less common than has been supposed; many cases formerly diagnosed as such have been shown to represent exacerbations in chronic nephritis.

Renal Casts—Their Significance and Detection. Linsley (*Med. Rec.*, Oct. 21, 1899) states that there are a great many more cases of chronic interstitial nephritis than is commonly supposed. These diseases occur generally after middle age, in apparently strong, healthy and well-nourished individuals, and are the most insidious of all physical derangements. The first symptom is frequent micturition, followed by headache, derangement of digestion, and slight dyspnea. The quantity of urine may be normal, and only a mere trace of albumin found. This is the time when a careful microscopic examination should be made, and by the various casts found a proper diagnosis made. The author sums up the various casts as follows: Hyaline casts are the least important, and are due to renal irritation; granular casts represent a nephritis of some standing; epithelial and mixed casts represent an acute inflammation; blood casts are reliable evidence of renal hemorrhage; pus casts, which are rare, are found in multiple renal abscesses, pyelo-nephritis, and almost any suppurative process involving the parenchyma of the organ; fatty casts represent an active degeneration of protoplasm, or a severe toxemia; casts composed of bacteria may be found in cases of septic nephritis; waxy or amyloid casts are generally due to various infectious diseases. [The last as to waxy and amyloid casts, we consider as open to question.—Ed.]

DERMATOLOGY.

UNDER THE CHARGE OF
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Two Epidemics of Alopecia Areata in an Asylum for Girls. Bowen (*Jour. of Cut. and Gen.-Urin. Dis.*, Sept., 1899) reports two most interesting epidemics of alopecia areata, occurring in an institution for homeless girls in Boston. Several months after a young girl had become attacked with areate baldness of the scalp, the disease broke out among the other inmates of the home in which she lived, and spread so rapidly that in a short time 63 of the 69 girls were attacked. After several years' absence the original patient returned to the asylum, and again gave rise to an epidemic of the disease, this time 26 out of 45 inmates becoming affected, although only 4 of these were among those previously attacked. The disease differed only from the ordinary type of alopecia areata in the smallness of the patches and their angularity. Numerous examinations of the hairs failed to show the presence of any parasite. Similar epidemics have been recorded by French observers, but heretofore none has been noted in America.

A Note on Leprous Fever. Lewers (*Brit. Jour. Dermat.*, Oct., 1899) reports a case of leprous fever in a patient at the Charing Cross Hospital, and discusses the frequency and nature of febrile attacks in leprosy. Whilst it is contended that these attacks have been frequently confounded with malaria, the writer believes that leprous fever bears a closer resemblance to the fever of tuberculosis pulmonalis. In concluding, he puts forth the following series of suggestions: (1) That there is an essential leprous fever due to the presence of the bacillus leprae or its toxins. (2) That this fever is always intermittent, if uncomplicated. (3) That this fever may occur at any period of the disease, including the so-called prodromal period of some writers, and may or may not be accompanied by an eruption. (4) Since all forms of the disease (lepra) depend on the same organism, the fever probably occurs in all, although in varying degree. (5) That when fever of a continued type is observed in leprosy it is due to the presence of other toxins acting either with, or entirely apart from, those of the bacillus leprae. (6) That the essential fever of leprosy has little clinical import beyond indicating that the disease is active and progressive.

Erythema Toxicum with Fatal Termination. Kaposi (*Allgemeine Weiner. Med. Zeit.*, Sept. 19, 1899), after remarking upon the erythemata produced by such drugs as quinin and antipyrin, reports a

fatal case of erythema of unknown origin occurring in one of his female patients. This woman became ill on May 27th, exhibiting upon the body kreuzer to thaler sized red spots with blackish-blue centers, evidently hemorrhagic. Extensive hemorrhagic areas were present upon the mucous membrane of the mouth, throat and eyes, and, as was later discovered, also in the trachea and lungs. The patient vomited blood upon one or two occasions. The temperature fluctuated between 38° and 39° C. The patient became progressively worse, and died on June 7th. Late in the course of the disease a curious symptom manifested itself. At the site of the bluish macules upon the skin and conjunctiva there developed large flat blebs, 8 or 10 days after the onset of the attack. These blebs were produced by a lifting up of the epidermis by serum which was expressed from masses of free blood by the contraction of the fibrin. Such a manifestation may even take place in a dead body. Inasmuch as the eruption did not attack the backs of the hands or feet, the disease is to be looked upon as an erythema toxicum rather than erythema multiforme. The patient had taken antipyrin and had eaten sausage some days before, but it is impossible to attribute, with accuracy, the toxemia to these causes.

THERAPEUTICS.

UNDER THE CHARGE OF

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The Physiological Action and Therapeutics of Guaiamar, a Derivative of Guaiacol. Butler (*N. Y. Med. Jour.*, Sept. 23, 1899) has found it to be a valuable substitute for creasote and guaiacol. Chemically—it is a glycerol ether of guaiacol, white crystalline powder; melts at 75° C.; is soluble in alcohol, chloroform, ether, glycerin, and in about 20 parts of water; neutral, non-hygroscopic; has a bitter, aromatic taste; may be administered with quinin, cod-liver oil, malt, etc. Its chief value is that it liberates guaiacol in the stomach and intestinal tract. It does not seem to interfere with digestion; in ordinary doses, 3 to 15 grs., does not cause any irritation of the urinary tract. When he administered it to cases of typhoid fever the case seemed to be milder, although cold baths were used when the

temperature arose above 102.5°. In rheumatism, in conjunction with salicylates, and in gonorrheal arthritis an ointment of guaiamar 3ii ung. belladonnae, ung. hydrargyri aa 3iv applied to the parts gave relief. In lung diseases it has the same advantages as creasote, which he believes to be the most efficient drug of this class. It does not disturb digestion, which is a great advantage. Its antiseptic properties make it valuable in diarrheas in children as well as adults. Locally it may be used as an antiseptic wash for the mouth, ulcers, etc. Chronic cystitis also seems to yield quickly under its use.

Succedaneum to Digitalis. Dalton (*Va. Med. Semi-Monthly,* July 21, 1899) believes strophanthus to be the best substitute for digitalis, and prefers it to spartein and alcohol. Although he has found spartein to be useful in cases of mitral insufficiency, where heart failure threatens, it is contraindicated in cases where there is pronounced inflammation of heart, lungs or kidneys. He does not agree with Hare that it is useless, but with Shoemaker, that it is valuable in defective compensation, exophthalmic goiter, and asthma from cardiac orgin. In one of his cases, a boy of twelve, he gave 30 gtt. of tr. digitalis, increased to 40 *t.i.d.,* and had started to reduce it when delirium, dyspnea and cyanosis appeared; he substituted tr. strophanthus for a few days, until the alarming symptoms disappeared. Another case he mentions, of alcoholic pneumonia, where digitalis was of little use, while strophanthus and ammonol, for the fever, in conjunction with strychnia, were very effective.

Passiflora Incarnata. Fisher (*Va. Med. Semi.-Monthly,* July 21, 1899) has found May Pop (passiflora incarnata Lin.) to be a valuable sedative, antispasmodic and hypnotic; also especially useful in the insomnia of old age, spasms from indigestion in children, and hysteria, in the restless vigil of typhoid fever. It can be substituted for opium, chloral and bromids in many cases, and the sleep produced is more natural, the patient is easily awakened, and is not so stupid. It does not produce the unpleasant after-effects which follow the use of the former.

A Preliminary Note on the Use of Asparagus as a Diuretic. Hare (*Therapeutic Gaz.,* Sept., 1899) used an extract made from the tops of asparagus in cases of general edema, with good effect upon the kidneys. The amount of urine was usually considerably increased in the course of a few days. In an advanced case of atheroma, with aortitis, probably fatty heart, it had no effect. In one case digitalis, bitartrate of potassium, and an infusion of juniper berries failed, while under the use of this drug the urine arose from 27 to 40 ℥ *per diem.* In one case, he continued its use for a month with good effect so long as the drug was given.

Importance of Internal Remedies in General Surgery. Manley (*Merck's Archives,* Vol. I., No. 7) thinks that many cases might be relieved by proper medication that were formerly considered only from an operative

standpoint. Tuberculous cases often are relieved by mercury, phosphorus, creasote, salol, etc., while iodoform may be injected directly into the infected part. He mentions three cases of cancer of the breast, two of which had their breasts amputated, and neither survived 18 months; while the third was treated by escharotics, and is still alive, although has a running sore and is free from pain. He dwells on the difficulty of diagnosis between neoplasms and syphilitic or tubercular ulcerations, and ends by stating that every surgeon should be as familiar with therapeutics as those men restricted to internal medicine alone.

Relative Toxicity of Cocain and Eucain. Peck (*Jour. Amer. Med. Assoc.,* Sept. 9, 1899) after a number of comparative experiments concludes thus: (1) The action of cocain is inconstant; one never knows whether the symptoms occasioned by like quantities of the drug, in animals or individuals, under like circumstances, will be similar or dissimilar. (2) The action of eucain is constant. The symptoms occasioned by the use of like quantities in animals under like circumstances, and so far as experiments have gone, in different individuals also, are the same. (3) The first action of cocain on the heart is that of a depressant, and on the respiration it is that of a mild stimulant, the after-effects being, on the heart, that of a decided stimulant, and on the respiration, that of a decided depressant. (4) The first action of eucain on both the heart and respiration is that of a stimulant, the after-effects being that of a decided depressant. (5) Cocain causes death in animals by paralyzing the muscles of the respiratory apparatus, the heart's action continuing in a feeble way for a brief period after breathing ceases. (6) Eucain causes death in animals by paralyzing the muscles of the heart and of the respiratory apparatus, they ceasing to operate simultaneously. (7) Eucain in toxic doses nearly always causes nausea, and occasionally vomiting. (8) Cocain is much less nauseating, and scarcely ever causes vomiting. (9) Eucain is decidedly a diuretic, causing renal discharge in a majority of instances in which a toxic dose is used. (10) Cocain is not a diuretic to any appreciable extent, renal discharge having occurred in only one instance in connection with all my experiments. (11) The pupils of the eyes, in nearly all cases of cocain poisoning, do not respond to light and are more or less protruding. (12) The pupils of the eyes in most cases of eucain poisoning do respond feebly to light, and rarely ever protrude. (13) The action of toxic doses of eucain is more like that of a paralyzing, tetanoiding, convulsion-producing agent, than it is like an anesthetizing one, the plantar and cremasteric reflexes nearly always responding. (14) Toxic doses of cocain cause general anesthesia in connection with the other symptoms in the majority of cases. (15) True tetanus, of all striped muscles of the limbs, and Cheyne-Stokes's breathing nearly always occur with the use of cocain, but seldom does either occur when eucain is used. (16) Cocain is at least three times more toxic than beta eucain, and alpha eucain is as toxic as cocain. (17) Boiling does not destroy the efficacy of cocain, but it does modify it, and boiling in no degree lessens the efficacy of eucain.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

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The Action of Carmine upon Toxins. Staudensky (*Ann. de'l Inst. Pasteur.* 2, 25, 1899) found that by adding 0.5 gm. carmine to each 10 c.c. of tetanus toxin he could render the poison inert to animals. When heated to 60°-100° C., however, this protective power was completely lost; but when heated in the dry state in a sealed tube the property was preserved. If the carmine were kept moist for 24 hours it afforded little or no protection. This protection was apparently not due to any combination, for after filtering the carmine out the filtrate again became poisonous. A marked inflammatory infiltration, greater than that resulting from carmine injection alone, forms at the seat of inoculation. In this area the carmine granules have been found to be surrounded by many leucocytes and in 60-70 hours they remove all of the carmine from the area. Staudensky thinks that the leucocytes, attracted by the carmine, destroy the toxin. Other experiments have shown that carmine also protects against diphtheria and other toxins.

The Relation of the Leucocytes to Immunity. Weirgo (*Archiv. de Med. Experimentale et de' Anat. Path.,* Tome X., p. 725) has studied the relation of the leucocytes to the immunity acquired to symptomatic anthrax. In both the natural and immunized animal the leucocytes were found to be active. Even in the natural manner at times more bacteria were killed than would constitute a fatal dose, while all of the bacteria are killed by the leucocytes of the immunized animal. In the immunized animal the leucocytes act very vigorously until the bacteria are exterminated, while in the natural animal the leucocytes repeatedly repel but do not annihilate the invaders. Weirgo, in opposition to the views of Metchnikoff, shows that the normal leucocytes are sensitive and attracted by the bacteria and that during the process of immunization this sensitiveness to bacteria attraction is much increased. He believes that the immunity of the rabbit to symptomatic anthrax resides solely in the elevation of the normal power of the leucocyte to destroy the bacteria and to the development of leucocytosis.

The Action of the Digestive Juices upon Toxins. Carrier (*Ann. de'l Inst. Pasteur,* p. 435, 1899) reaches the following conclusion as to the action of digestive ferments upon toxins and antitoxins:

Toxins.—Ptyalin totally destroys the action of tetanus toxin and venin.

Gastric juice in considerable amounts attenuates and often destroys them. Bile attenuates or destroys them, but a considerable quantity is required for the purpose. Pancreatin attenuates tetanus toxin without destroying it; but in large amounts it may destroy it. Venin is readily destroyed by pancreatin.

Antitoxins.—Ptyalin does not modify antitoxic serum. Gastric juice exerts little effect upon the serums, antivenomous serum being a little weakened. Bile does not modify any of the antitoxins studied. Pancreatin strongly modifies and eventually destroys the serum, and the succus entericus seems to possess a similar action. The intestinal bacteria and the intestinal epithelium seem also to be capable of removing the activity of the serums.

The Causes of the Inactivity of Antidiphtheritic Serum When Introduced into the Stomach or Rectum. Nedrigajlow (*Vratch*, Vol. XX., No. 26), having found antitoxin inactive, when administered per os or rectum (See INTERNATIONAL MEDICAL MAGAZINE, Oct., 1899), endeavored to determine by experiments on animals what becomes of the antitoxin thus introduced, and if it is destroyed, where and when the destruction takes place. A number of experiments were performed which seem to have established the following facts: That antitoxin when administered per os cannot be found in the feces. Within 3 hours the serum can be found both in the stomach and small intestine, but not after 7 hours. The antitoxin could not be found in the liver, showing that the latter organ has nothing to do with its disappearance from the stomach. The walls of the stomach and intestines also failed *in vitro* to produce any alterations in the serum. The gastric juice has a very slight, if any, effect on antitoxin. The HCl has no effect whatever on either the toxin or antitoxin. The bile exerts a notable destructive action on the toxin, but none on antitoxin. The pancreatic juice completely destroys the toxins, but has no effect on antitoxin. The author also repeated the experiments of Escherich, who claimed to have succeeded in demonstrating the absence of antitoxin in the blood of the jugular vein after it had been introduced into the portal vein, thus proving that the liver destroys the antitoxin. The results obtained by the author, however, were directly opposed to those of Escherich. The antitoxin was demonstrated in the blood of the jugular vein, thus indicating that the liver does not destroy the antitoxins. The author concludes his very excellent paper by leaving the original problems unsolved. A. R.

Lupus Erythematosis. Good results have followed the suggestion of Hans Hebra to apply pure alcohol continuously to the affected area; or, the following may be used:

℞ Menthol, ... gr. viij;
Alcohol (95%), ... ℥jj.
M. S.: Apply continuously.

CLIMATOLOGY AND HYGIENE.

UNDER THE CHARGE OF

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On the Question of Determining the Quality of the Air of Dwellings by Means of a Solution of Permanganate of Potash.

Lebedew (*Vratch*, Vol. XX., No. 25) quotes several competent observers in support of his belief that the amount of CO_2 in the air does not serve as an indication of its utility for respiration. It has been established by experiments on animals that to be poisonous the air must contain 30% of CO_2, an amount which even the air of the most crowded rooms does not contain. The vitiated air, therefore, owes its bad effects to organic matter derived from the exhalations of the skin, clothes, dust, etc. To determine the amount of this organic matter, the author employs the following method: 0.316 gms. of permanganate of potash are dissolved in 1,000 c.c. of distilled water. To 100 c.c. of this solution are added 100 c.c. of HCl (1:3) and 800 c.c. of water. The solution of permanganate thus obtained is 0.0316:1,000. A solution of oxalic acid is then made up in the following manner: 0.63 gms. of oxalic acid are dissolved in 1,000 c.c. of distilled water; 100 c.c. of this again mixed with enough water to make 1 liter. This solution is 0.063:1,000, and 1 c.c. = 0.008 mlgms. of O_2. The solution of permanganate of potash is then titrated as follows: Two test tubes, each containing 10 c.c. of the permanganate solution, are immersed in boiling water for 10 minutes. (To exclude dust the tubes are closed with rubber stoppers, through which is passed a small glass tube covered by a rubber cap having several slits so that the heated air can pass out, but no dust is admitted.) The tubes are then removed, and 20 c.c. of the oxalic acid solution added to each. They are then titrated with the permanganate until a permanent rose color appears, and the amount noted. Thus the amount of permanganate solution which equals 0.16 mlgms. of O_2 is determined. All the appliances used should be scrupulously cleansed with distilled water, strong HCl and bichromate of potash. To test the organic constituents of the air two Pettenkofer tubes are filled with the permanganate solution and joined by rubber tubing, one of the tubes being connected with a bottle of a certain capacity containing water, and the latter with another empty bottle placed at a lower level. The water, by siphonage, enters into the empty bottle, and thus draws the air through the Pettenkofer tubes. (To avoid the action of light on the permanganate, the tubes are wrapped in cloth.) The air is allowed to pass for 3-5 hours

and 10 c.c. from each tube are then titrated as above. Example: Prior to experiments 10 c.c. are taken for titration and 19.8 c.c. are required in addition to neutralize 20 c.c. of oxalic acid solution. Total, 29.8 c.c.; in other words, 29.8 c.c. = 0.16 mlgms. of O_2. 100 c.c. will equal 0.5369 mlgms. O_2 ($\times$:0.16=100:29.8). After the air has passed through the tubes, it was found that 30 c.c. neutralized 20 c.c. of oxalic acid solution, or 100 c.c. = 0.5333 mlgms. of O_2. The difference then is 0.0036 mlgms. of O (0.5369-0.5333), which were used up in the oxidation of the organic matter of the air. The amount of air used for the experiments, say, is 36 liters (this is determined by the amount of water passed from the first bottle into the second during the entire experiment.—A. R.), which contained organic matter requiring 0.0036 mlgms. for oxidation. One liter would require $\frac{0.0036}{36}$ =0.0001 mlgm. O_2 and 1,000 liters of air will require 0.1 mlgm. Several experiments performed by the author led him to establish the following rule: The respired air should not require more than 4 volumes of O to oxidize the organic matter contained in 1,000,000 volumes of air.

Report to the Investigating Committee upon the Chicago Draining Canal. Starkloff (*Med. Rev.*, Aug. 5, 1899) contributes a very valuable and interesting paper on the subject of sewage contamination of drinking water. The report refers principally to the water supply of Chicago, and the Chicago Drainage Canal, which is to connect the south branch of the Chicago with the Illinois River. The purpose of this canal is to relieve the river of its burden of filth by conducting a large volume of water from Lake Michigan through it to the Illinois River, as well as to carry away all the sewage of Chicago, which, according to computation, will amount to 375,000 pounds of solid and 670,000 gallons of liquid excreta daily. It is hoped by those favoring the canal that the dilution of this sewage with large volumes of water will accomplish purification. The author quotes many authorities, and cites instances to explode this erroneous theory. In recapitulating the evidences furnished by a mass of overwhelming testimony, he formulates the following conclusions: (1) The bacillus of typhoid fever is the specific cause of that disease. (2) It is discharged from patients sick with the disease in the feces and urine. (3) This bacillus, although not forming spores, is very resistant; (4) it can live not only in water, but frozen in ice for a number of days. (5) There is no substantial evidence to contradict the assertion of authorities that typhoid bacilli, under favorable circumstances, can live and propagate in a running stream, and we have abundant and convincing evidence that sewage-polluted water produces typhoid fever in persons drinking it. (6) A sewage-polluted water may have all the appearances of purity, so much so as to defy the most exquisite tests of the chemist or the exhaustive examinations of a biologist to detect evidence of sewage in it, and still produce typhoid fever in those who drink it. (7) We have the statistical evidence of a number of municipal governments in both this and foreign countries showing the great improvement in the typhoid fever death-rate following either the substitution of a pure for a sewage-polluted water or the cleansing of a polluted water by filtration

through sand, etc. (8) We have the laws enacted by foreign governments in regard to the prevention of the pollution of streams by sewage; and (9) the expressed statement in this and foreign countries of authoritative investigating committees that sewage, no matter how greatly diluted, is not fit for human consumption, and that no river is long enough to purify itself of sewage, even if put into it at its source.

SURGERY.

UNDER THE CHARGE OF

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Treatment of Certain Functional Derangement of the Abdominal Organs, due to Disturbance of the Solar Plexus. Jaboulay (*Lyon Medicale*, No. 13, 1899) has boldly attempted to cure by an operation one of the series of disturbances which sometimes affect the large organs of the abdomen, as the pancreas, liver, spleen, kidneys and suprarenals, as well as in the aorta. These are traceable to a functional disturbance of the abdominal sympathetic. They occur frequently in neurotics and display themselves at times in strong pulsation in the epigastric region, and inflation and paresis of the intestinal walls. Based on the results that Basedow reached in his treatment of the sympathetic of the neck, Jaboulay took a similar course in these irritations of the abdominal sympathetic. He had only one opportunity of testing it. The patient, a woman of 35, in earlier life had had 5 attacks of purulent salpingitis and hemorrhagic metritis. Her nervous disturbance manifested itself principally by pulsation in the epigastrium, as above mentioned. The author does not dwell on the marked improvement that had occurred in the patient, but on the practicability of the operation he undertook. The technic was as follows: After exposing by celiotomy the pylorus and drawing it downward, the left index finger sought the abdominal aorta; then by the strong pulsation the coeliac axis and renal arteries were readily felt. By means of a grooved director, the coeliac axis and the anterior surface of the aorta were made free. The director was then pushed downward and to the side of the superior mesenteric, the same as in applying a ligature. This exposure was sufficient to influence the branches of the solar plexus, that cross each other on the anterior surface of this part of the aorta after it leaves the semi-lunar ganglion, and the maneuver itself exercised beneficial influence on the functions of the stomach, intestines, liver, spleen, pancreas, kidneys and suprarenals.

A New Method of Reducing Old Dislocations of the Lower Jaw. McGrau (*Med. Rec.*, Oct. 7, 1899), having a case of obstinate dislocation of the mandible of five months' standing, successfully resorted to a new method of reduction. A strong steel hook with a short prong running near and parallel to the shaft, was provided. Incisions were made under each zygoma, the fibers of the masseter were separated and the hook slipped in and caught over the bone at the sigmoid notch. After considerable traction upon each side, the dislocation was reduced. Perfect functional restoration resulted.

Carcinoma under the Age of Thirty. Cumston (*Boston Med. and Surg. Jour.*, Nov. 2, 1899) refers to a large number of historical cases of carcinoma in patients under 30 years of age and presents the histories of 3 cases that have occurred in his own practice. The first patient, aged 19, was jaundiced and had a large tumor in right hypochondriac region. Upon opening the abdomen, the tumor was found to be the enlarged liver. A diagnosis of carcinoma of the liver was made, apparently without any histological study. The second patient, aged 28, had a cauliflower growth of the cervix that histologically was found to be epithelioma. The third patient, aged 24, had an annular tumor of the ascending colon that was found under the microscope to be a cylinder-celled carcinoma. There was a fatal termination in each case.

A Simple Palliative Operation Applicable to Obstructing Cancer of the Pyloris too Extensive for Complete Removal. Martin (*Univ. Med. Mag.*, Nov., 1899) believes that in the palliative treatment of advanced gastric carcinoma the relief from pain and vomiting and the prolongation of life may be best accomplished by excluding the stomach from the digestive processes. To this end, he has used an operation similar to that of Witzel for gastrostomy in the performance of a duodenostomy. An abdominal incision is made and a tube of the caliber of a 40 French sound laid upon the surface of the first part of the duodenum. Interrupted catgut sutures are so introduced as to lift a plication of the bowel well upon each side of the tube, completely covering the portion of the tube in contact with the bowel. Thus a long canal is formed in the wall of the intestine. Between the lower two stitches a slit is made in the intestine and the lower end of the tube introduced into the bowel. The upper end of the tube is brought out through the abdominal incision and stitches are so introduced as to prevent leakage from the newly formed canal. The patient is fed by digested foods introduced through the tube. Both of the recorded cases were well advanced, but in one the patient gained weight and strength; the other patient died. This operation is also indicated in intractable gastric ulcer. After the duodenostomy unirritating antiseptic and analgesic gastric lavage should be used. The course of the cancer is believed to be less rapid when the stomach is thus placed at rest.

On Some Important Points Regarding the Perfection of Asepsis. Beck (*Med. Rec.,* Oct. 7, 1899) says that the factors which may interfere with surgical asepsis are, first, the instruments, suture and dressing material; and, second, the atmosphere, the skin of the patient and the surgeon's hands. Ideal asepsis has been established with the first factors. Atmospheric infection may result from the stirring up of the dust of a room, or from expired air, especially if the surgeon suffers from rhinitis or tonsillitis and talks or coughs over the wound. The mechanical methods of skin disinfection are of chief importance. When possible, the area is to be scrubbed, shaved and covered with a green soap poultice. Before the operation the area is thoroughly scrubbed, under irrigation, with linen compresses dipped in hard fluid soap. This consists of green soap mixed with soft (Stuttgart) sand. This green soap is then used under irrigation, the skin dried, rubbed with gauze compresses wet with 50% alcohol, after which some disinfectant solution may be employed. The following precautions are also advised: (1) Aseptic gloves are worn by the operating surgeon at least during the skin incision. The assistant who passes the instruments and the one who attends to the wound itself wear gloves throughout the whole operation. (2) After incision the wound margins of the skin are covered with sterile napkins, which are fastened to the wound surface underneath the skin margins with miniature forceps, so that the skin wound is not touched at all during the subsequent manipulations. (3) The knife used for the skin incision must not be used for further incisions. The operation should be performed as rapidly as possible. (4) For uniting the wound margins of the skin the subcutaneous method should be preferred. (5) Forcible manipulations, especially blunt operating, should be avoided. (6) The surgeon and assistants wear sterilized suits or gowns. Their heads must be covered with sterilized caps, because in bending over the field of operation it often happens that the heads of the surgeon and his assistant come in contact, whereby infectious material might be introduced into the wound. (7) Long beards are entirely unsurgical. (8) If a surgeon should suffer from rhinitis, tonsillitis, etc., he should use the most minute local precautions, or would better omit operating until recovery. A surgeon should regard it as a crime to operate as long as he suffers even from a slight furuncle on his hand.

The New Treatment of Tetanus. In an article under this heading Lamphear (*Amer. Jour. of Surg. and Gyn.,* July, 1899) gives the following practical conclusion: (1) In wounds of such character that the onset of tetanus is feared, preventive injections of tetanic antitoxin are advisable. (2) When symptoms of acute tetanus arise, hypodermatic injections of 10 c.c. or more of serum should be given every 6 to 12 hours. (3) As early as possible a competent surgeon should be called to trephine, under strictest antiseptic conditions, and inject 6 c.c. of concentrated serum into the brain. (4) In tetanus neonatorum appropriate doses should be given subcutaneously, and into the brain substance through the frontanelles. (5) Combined with the serum treatment should be the free use of those sedative agents which have been found of benefit prior to the introduction of serotherapy.

LARYNGOLOGY AND RHINOLOGY.

UNDER THE CHARGE OF

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Adenoid Tumors of the Naso-Pharynx (Tumeurs adenoides du Pharynx Nasal). Menière (*Communication faite a l'Academie de medecine en juillet*, 1899) gives the following interesting statistics and observations: At the close of 1891 he had presented statistics of 1,115 adenotomies. Since this time he has made 2,591. According to his observations, medical treatment for adenoid vegetations is of no value. Operations alone give good results. The author thinks that chloroform anesthesia is too dangerous to be used in young children; the bromid of ethel is safer and better for a complete operation: according to the amount, one can produce a long or short anesthesia. He finds that the chloroform contracts the jaws to such an extent that on withdrawal of the anesthetic for the purpose of passing the instrument the child recovers so quickly that the operation is embarrassed. He has adopted the following technique: (1) Washing of the pharynx 3 or 4 days with warm boracic acid solution. (2) If the adenoids are very large, he recommends their removal by two sittings: first, the gland structure is crushed by means of forceps and after 4 or 5 days the remaining gland structure is removed by curettement by means of the long curet of Lange. If the adenoids are lateral only and not central masses, the crushing is omitted, and the gland is removed at once by means of the same curet. The nostril is then cleansed with an antiseptic wash and sprayed with mentholated cosmolin or vaselin.

Abscess of the Larynx. Haviland Hall (*Rev. Hebdom. de Laryngol., etc.*, No. 36, Sept. 9, 1899) reports a case and shows a specimen of abscess of the larynx. The larynx was of a young girl 17 years of age, admitted December 17th, at Westminster Hospital, for acute Bright's disease and infectious pneumonia. Soon after admission she was taken with hoarseness and dysphagia, and her condition was so grave that laryngoscopic examination could not be made. The patient died December 24th. The autopsy showed that the cartilages were completely necrosed; nearly an ounce of thick, fetid pus was present. The abscess had recently perforated into the larynx by a small opening; both lungs were hepatized; there were also pericardial adhesions; the valves were normal, with the exception of the mitral, around which existed a ring of large vegetations; in the

right lobe of the liver was found a hydatid cyst the size of an orange, containing hydatic membranes and some viscid pus; the spleen and kidneys presented the ordinary toxemic alterations.

Septic Thrombo-Phlebitis as a Complication of Peritonsillar Abscess. M. R. Ward, of Pittsburg (*N. Y. Med. Jour.*, Oct. 14, 1899), reports two cases of this unusual condition—the first, I believe, on record. The condition is somewhat similar to septic sinus thrombosis as a result of mastoid suppuration.

Foreign Body in the Larynx. Walker Downie (*The Lancet*, Oct. 14, 1899) reports a case in which for 4 weeks a small silver coin was lodged in the larynx. The interesting feature of the case was, that although the coin lay on the vocal cords so that the extremities, anterior and posterior alone, could be seen, there was no dyspnea. The coin was removed under cocain anesthesia by means of Mackenzie's antero-posterior laryngeal forceps. There were no bad after effects, the erosion quickly healing after the removal of the foreign body.

Fibro-Lipoma of the Tonsil. Thomas Amory DeBlois, of Boston (*N. Y. Med. Jour.*, Oct. 28, 1899), reports microscopic examination of a tumor removed from the tonsil, which proved to be a fibro-lipoma—an unusual mixed tumor, having its site in the tonsil.

Relation of Pathologic Conditions of the Ethmoid Region of the Nose to Asthma. Henry L. Swain (*N. Y. Med. Jour.*, Oct. 28, 1899): "The title assumes that either such a relation is supposed to or does exist, and, if the latter, the question arises, What sort of relationship is it? Shall we consider that the nasal condition produces the asthma, cause and effect, or is the ethmoid condition an accidental complication of the asthma, or are they both the result of some depraved condition in these two diseased processes; and, if the latter is the case, what is the exact role of the nasal disease in the asthmatic complex?" The paper deals with the local lesions which might produce reflexes and also systemic conditions which might produce local reflexes. In conclusion, he says the deduction is plain, therefore, that when treating many of the pathologic conditions in the nose, whether asthma exists or not, we must often look outside of the nose, and many times outside of the body, for the cause which led up to them.

A Case of Empyema of the Ethmoid Cells (Un cas d'empyeme des cellules ethmoidales). Lefrancois, de Cherbourg, reports a case of empyema of the ethmoid cells with orbicular complications. From the symptoms given, he calls attention to the fact that more frequently the ophthalmologist is consulted, when in reality it is a case for the rhinologist. He considers the condition not so rare as generally supposed. Operative interference resulted in cure of the case reported.—(*Rev. Hebdom. de Laryngol., etc.*, No. 40, Oct. 7, 1899.)

Use of Rubber Splints in Intranasal Operations. J. Price Brown (*Canadian Pract.*, Vol. XXV., No. 7): These splints are made from thick rubber sheeting, and can be cut to any size desired. They are used for support to the fractured septum. Dr. Brown maintains that the splints prevent granulations. The splint can be grooved to fit any irregularity on the septum or turbinate. The splints should not be perforated.

OPHTHALMOLOGY.

UNDER THE CHARGE OF

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Eye-Symptoms of Akromegaly. Leszynsky (*Phila. Med. Jour.*, Oct. 7, 1899) discusses this subject and reports a representative case. It is well known that a variety of eye-symptoms may occur as an accompaniment of akromegaly, but the most important are those due to involvement of the optic nerves. Vision is impaired in many cases. The symptoms are usually early and take a progressive course. In some cases they appear among the later manifestations of the disease. Bi-temporal or one-sided temporal hemianopsia for form and color is frequently observed. This is due to an overgrowth or neoplasm involving the hypophysis which presses on the chiasm, and also to bony changes in the optic foramina. In this manner the arterial supply of the nerve and eyeball is also disturbed. But the usual cause is unquestionably an enlargement of the hypophysis. This enlargement, making prolonged and gradual pressure, produces slow degeneration of the optic nerve-fibers, until ultimately the atrophy of the nerves becomes complete. Homonymous hemianopsia occasionally occurs from the growth pressing upon one optic tract. At almost every autopsy in which a hypophysis tumor has been revealed in akromegaly, the optic nerves have been found flattened mostly in the region of the chiasm. The microscopic examination shows a pronounced degeneration of the nerves, especially that portion in direct contact with the tumor. On the other hand, hypophysis enlargements, whether benign or malignant, may produce optic-nerve disease, without at any time presenting a hemianopic field. In these cases, at times, there is pronounced involvement of only one eye, clinically a simple optic atrophy. Again, there are cases which run a course with papillitis, and these are most frequently tumor of the hypophysis, usually sarcoma. They may also terminate in complete blindness through consecutive atrophy. The changes in the pupillary reaction are those which are usually associated with lesions affecting the anterior (noncortical) portion of the optic tract, producing hemianopsia. The Wernicke reaction is often demonstrable, and was present in the patient shown. Among other eye-symptoms that occur in this affection are: Exophthalmos, probably from proliferation of adipose tissue back of the bulb, and oculomotor paralysis from pressure on the third nerve nucleus. Leszynsky believes that in those cases accompanied by ocular dis-

turbances as above mentioned, and their association with persistent headache, anosmia, paresthesia in the extremities and impotence, that an early diagnosis might probably be made before the characteristic enlargement of the extremities becomes pronounced. It remains an open question, however, whether or not the eye-symptoms and the enlarged extremities develop progressively at about the same time.

The Absorption of Uncomplicated Immature Cataract by Conjoined Manipulation and Instillation. Kalish (*Med. News,* Oct. 14, 1894) reiterates his belief in his method, first published nine years ago, and notwithstanding lack of support and adverse criticism, he forcibly protests that it will often produce a permanent result, although he admits that some cases will not be modified. In a series of 118 eyes he reports 69 successful results, and states that the percentage in his recent cases is still higher. He excludes cases of complicated cataract; that is, those accompanied by diabetes, nephritis, choroiditis, retinitis, keratitis, or other serious systemic or local pathologic changes. He is unable to say at present whether or not arthritis is a serious complication. An error of refraction is an accompaniment but by no means a complication. His conclusions are as follows: (1) Immature cataract is due to local conditions dependent on general systemic causes. (2) Senility is rarely a direct, but may be a predisposing, cause. (3) Fluids containing perverted aliment resulting from defective metabolism supplied to the lens through its nutritive stream may be considered an exciting cause. (4) Deficient blood-supply, thus reducing the quantity furnished, may be considered a contributing cause.

The following conclusions may be drawn: (1) Immature cataract may be regarded as a largely preventable disease. (2) It may, by properly directed treatment, local and constitutional, be prevented, arrested, retarded or cured. (3) The circulation of the blood must be regulated. (4) The faulty digestion must be rectified. (5) Constant supervision of the eye must be maintained by a competent ophthalmologist, that eye strain be relieved, and all changes in refraction be promptly remedied. (6) Treatment by conjoined manipulation and instillation should be instituted at the earliest possible moment. (7) Finally, if local and constitutional treatment should not provoke a favorable issue, they will establish a more nearly normal state of the ocular tissues, and if an operation be found necessary, this improved condition of the ocular structures will ensure a larger degree of success.

The paper is accompanied by a plate of illustrations of many different types. His selection of cases was made solely to present a pictoric representation of lenticular opacities before and after treatment, and the ones chosen were those in which there was the longest interval between the first and the latest examination, the object being to demonstrate that progress of the cataract was arrested and the absorption of the opacity was permanent. (The method of manipulation or massage, the composition of the fluid instilled (5% glycerin), etc., are given in full in Kalish's first paper.—*Med. Rec.,* 1890, XXXVII., 341.)

Traumatic Expulsion of Both Crystalline Lenses in Consecutive Accidents. Thilliez (*Jour. des Sci. méd. de Lille*, Sept. 23, 1899) reports a case of this nature in a woman, who had received a penetrating wound of the anterior right eyeball by a cow horn, and some months later was struck in the left eyeball by an iron bar. At the time of examination the scar in the right cornea and sclera was plainly visible. There were no signs of the lens, but the pupil was occupied by opaque capsule, showing that the lens had been expelled from its capsule. Light perception and projection were good. The cicatrix was plainly visible in the left eye, but there were no signs of either lens or capsule. The pupil was black and the iris was freely movable. Vision with $+S.\ 8.00\ D = \frac{1}{4}$. In this case undoubtedly the traumatism had caused expulsion of the lens in its capsule, leaving the pupil entirely free.

GENITO-URINARY SURGERY AND VENEREAL DISEASES.

UNDER THE CHARGE OF

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Syphilitic Cutaneous Scars. Ohmann-Dumesnil (*Med. Rev.*, July 1, 1899) notes that syphilitic scars are the result of either superficial or deep destructive lesions. The chancre being a simple, round-cell infiltration, should, if properly treated, leave no scar. Where there is no reckless cauterization of the sore, there is no resultant scar. The scars of superficial cutaneous syphilides are characterized, first, by a peculiar dark bronze pigmentation, sharply defined against the unaffected skin. In the course of time this color gradually fades away, this bleaching process always beginning in the centre of the pigmented area. Later on another marked characteristic of syphilitic scars is shown, as a result of this continued bleaching, in an entire loss of the natural pigment of the skin, so much so that the scar becomes a dead white in color and very glistening. In deep destructive lesions of the skin the resultant scar is crater shaped and somewhat stellate in appearance. They are, moreover, inclined to be hypertrophic in character and present a very unsightly appearance. Where ulcerative lesions occur upon the scalp and over subcutaneous bones, the scar is apt to be considerably depressed and firmly adherent to the bone.

The Neglect of Sexual Symptoms in the Treatment of the Male Genito-Urinary Organs. Cabot (*N. Y. Med. Rec.*, Sept. 30, 1899) makes a plea for a more scientific study of the sexual organs in health and disease than has been accorded them up to present time. He states that this great want of knowledge in regard to sexual life is due to, first, the lack of instruction given to growing boys and girls, with reference to sexual hygiene. In this connection, he refers to the air of mystery that is continually thrown about this subject by the parents of children. The second reason given is the lack of teaching in the medical schools on the subject of the sexual function and its relation to health and disease. Several cases of gonorrhea with vague, indefinite symptoms of sexual neurasthenia are cited as showing the importance of this subject. Among the conclusions drawn by the author are: (1) Sexual symptoms in genito-urinary practice should be carefully investigated, and thoroughly studied. (2) Various forms of remote nervous symptoms are directly traceable to disorders of the sexual organs.

Division of a Ureter with Successful End-to-End Suture of the Same, in a Case of Horse-shoe Kidney. Allen and Briggs (*Boston Med. and Surg. Jour.*, Oct. 5, 1899) reports the case of a woman aged 33, single, who at the age of 13 noticed a lump on the right iliac region, hard and immovable. At the age of 28 laparotomy was performed, and a tumor of the right ovary was said to have been removed. Upon admission to hospital, January, 1899, patient still presented painful tumor in right iliac region and was also suffering with painful and frequent micturition. On operating, a tumor was seen resting upon the brim of pelvis on the right side, which was found upon section to be a kidney surrounded by perirenal fat. Further examination showed the absence of a kidney upon the left side. Two ureters led into the tumor, which was decided to be a horse-shoe kidney. Early in the operation the ureter on the left side was divided. Being unwilling to trust to the right ureter to drain both kidneys, the writers resorted to end-to-end suture in the case of divided ureter. A glass drainage tube was carried through an opening in the vaginal vault, into the pelvis, to facilitate drainage and allow the escape of any urine which might leak from the ureter. There was for a few days some little discharge of urine per vaginam. The patient made a complete recovery.

An International Conference for the Prevention of Syphilis and the Venereal Diseases. (*Gaz. des Hop.*, Sept. 19, 1899.) At this conference, held in Brussels September 5, 1899, six questions were propounded and discussed: (1) Have the systems of actual regulation of prostitution any influence upon the dissemination of syphilis and the venereal diseases. In the discussion of this question, the point was made by Fournier that the young girl was always in the greatest danger, the age when infection is most likely to occur being eighteen. Three methods of protection are suggested: Moral education, coercive measures, and treatment of diseased conditions. (2) Is the actual medical surveillance

of prostitution capable of betterment? In answer to this question, Finger gives three methods: (*a*) A medical surveillance of persons susceptible to giving infection; (*b*) obligatory treatment of syphilities; (*c*) isolation of those affected with venereal disease. (3) From an exclusively medical point of view, is it better to maintain houses of prostitution, or would it be better to suppress them? From the discussion upon the second and third questions, it appeared to be the general opinion that houses of prostitution should be maintained under medical supervision, the medical examinations being made frequently and thoroughly, the women being completely undressed. (4) Is police surveillance of prostitution susceptible of betterment? In this connection it was considered impossible to form uniform laws capable of being applied to every nation. Every country, in the face of prostitution, ought to adopt a uniform legislation, in the interests of public health. (5) By what legal measures may we diminish the number of women who seek a livelihood in prostitution? The law of supply and demand answers this question. As long as there is a demand on the part of men for the company of prostitutes, so long will prostitution exist. (6) What general measures might be taken to efficiently combat the propagation of syphilis and other venereal diseases? Kaposi, in answer to this question, gives (*a*) that in all medical colleges regular lectures and clinics should be given on syphilis and venereal diseases and that these branches should be considered as of equal importance with medicine and surgery; (*b*) examinations in these subjects should be obligatory.

Spinal Complications of Gonorrhea. Kalendern (*Klin.-Ther. Woch,* Sept. 7, 1899) maintains that spinal complications in the course of gonorrhea are analogous to gonorrheal arthritis, endocarditis, etc., and are due to secretions or toxins elaborated by the gonococci; produces a lumbar meningomyelitis or a lumbar poliomyelitis; in the latter case, with resulting changes in the nerves of the lower extremities, and consequent muscular atrophy.

GYNECOLOGY.

UNDER THE CHARGE OF

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Celluloid-thread According to San-Rath Dr. Pagenstecher. Schlutius (*Centralblatt fur Gynak.,* Sept. 23), after referring to the frequency of stitch abscesses and septic infection from the ordinary suture material, expresses the need of a non-absorbing material for surgical use, and

thinks this need has been met by Pagenstecher's celluloid-thread. He first saw this used in the city hospital of Elberfeld about 2 years since. An attempt to prepare such a thread had been made many years before by Linhart, and later by Trendelenberg and Lawson Tait; but it was left for Pagenstecher to complete the task. This material, at first prepared only in the hospital under the supervision of the hospital physician, is now made in large quantities as follows: The best English gray linen thread is boiled in a 1% soda solution and thoroughly sterilized, then packed in sterile cloth and dried in a stream of hot air. It is then saturated in a specially prepared solution of celluloid, rendering it smooth and glossy, and after being heated in large disinfectors, it is packed in sterilized pasteboard boxes ready for sale and use. Schlutius describes this thread as firm and inflexible, and without that elasticity which causes the slipping and loosening of the knot. It is very easily threaded and tied, and is best for use in deep cavities as, because of its smooth, glossy surface, it never absorbs any secretion from the wound, and he has never observed any stitch abscesses or infection of any kind from its use. It is made in five sizes, rendering it suitable for all kinds of operations. It can be used in a finer size than silk, and hence is especially desirable for the most delicate operations, while the coarsest, No. 5, is the best for ligatures *en masse*. From the very favorable results following the use of this celluloid-thread in his own experience, as well as that of Pagenstecher, Schlutius believes that it will eventually supersede all other suture materials, being less expensive and better adapted to the general needs of the surgeon.

Disorders of the Menopause. Cushing (*Annals of Gynecol. and Pediat.*, July, 1899), in a valuable discussion of the menopause, lays down certain axioms which must be the guide of the modern practitioner, and through him of a laity better enlightened than in previous times. These rules are: (1) All irregular or profuse hemorrhages about the period of the change of life are suspicious; they, therefore, require immediate, thorough and competent examination. (2) All cases of incipient cancer of the uterus are easily diagnosticated by competent examiners, by the aid of the curet and microscope in doubtful cases, but usually by the presence and character of an ulcer. (3) All cases of cancer of the uterus in the early stages are susceptible of complete removal by total hysterectomy, with less than 2% of mortality in competent hands. There is, in fact, no organ of the body where cancer can be so totally and widely removed as in cancer of the uterus. (4) A large proportion, probably a large majority, of cases where total extirpation of the uterus for cancer is performed early, quite early, never have any relapse or recurrence in the scar or elsewhere. They are saved, and they enjoy not only life but the best of health.

Upon the Condition of the Uterus after the Extirpation of both Ovaries, and after their Transplantation to Another Place in the Abdominal Cavity. Rubenstein (*St. Petersburger Med. Woch.*, July 31, 1899) inquires into the cause of atrophy of the uterus after castra-

tion, and quotes the opinion of many writers on this subject. L. Tait believed there was present in the tube a center which influenced the nutrition of the uterus. Martin and Schroeder ascribe the uterine atrophy to the ligation of the spermatic artery; others, of the uterine artery; but both have been ligated and the uterus remained normal. Sokolow attributes the atrophy of the uterus to the injury of the nerves which control uterine nutrition; but Rhein, in his experimental studies, destroyed uterine, sacral, and sympathetic nerves and no atrophy occurred, and pregnancy completed its normal course. Rubenstein made experiments upon a dozen rabbits, leaving the ovary free in the abdominal cavity or suturing it to the peritoneum, and he found that whenever the transplanted ovary grew and functionated, no atrophy of the uterus occurred; but if the ovary itself was absorbed or in the least atrophied, the uterus showed atrophy of the muscles and mucous membrane, thickening of the vessels, and proliferation of the connective tissue in the uterine walls. The researches of Curatolo and Tarulli show that the assimilation of castrated animals is quite different from others, and there is a tendency to fat which is often utilized. There is also a diseased assimilation, osteomalacia, which can only be cured by castration. Rubenstein from his studies concluded that for the retention of a normal uterus, it is only important that the ovaries should not be removed from the organism, and should retain their vitality and activity, though not in their natural position; for in his experiments there were repeated pregnancies after the transplanting of the ovaries. It is, therefore, evident that the ovaries, beside their sexual function, possess another until recently unknown function, the power of producing a peculiar internal secretion which affects the whole organism.

Tumors of Gigantic Size. W. Roger Williams, F.R.C.S., Eng. (*Lancet*, Sept. 23), believing that great interest attaches to the study of the unusual and extraordinary, notices briefly some of the largest tumors known. When the minuteness of the germs whence these big tumors arise is considered, and the high degree of organization they attain, it seems not unreasonable to regard the force which originates them as analogous to that which determines the development *ab ovo*. It accords with this that the largest tumors almost invariably spring from those parts of the body whose post-embryonic developmental changes are most active—such as the uterus, the ovaries, and the mammae. Tumors of this kind are nearly always of slow growth and of the non-malignant variety. To the uterus belongs the distinction of having produced the largest tumor on record, the weight of this gigantic formation being 195 lbs. It was a cystic myoma, the cystic part containing 17½ lbs. of coffee-ground sediment. The abdominal distension was enormous, the patient measuring 6 ft. at the level of the umbilicus. The subcutaneous veins were very prominent and the skin over its lower part was edematous and corroded. The patient was under the care of Severanu, of Bucharest, who removed the tumor by laparotomy. Several instances of myomatous tumors weighing over 100 lbs. have been recorded. Dr. Elizabeth Reifsnyder, of Shanghai, has described the largest ovarian

tumor extant. This colossal growth, which weighed 169 lbs., was removed from a small Chinese woman, aged 25 years, who, without the tumor, weighed only 77 lbs. Her height was only 4 ft. 8 in., but around the abdomen she measured 5 ft. 9 in. The tumor reached to her knees and made walking almost impossible. The lower limbs, back, and the lower part of the abdominal wall were edematous, and both legs were ulcerated. During the removal of the tumor by laparotomy it was found to be extensively adherent to the abdominal wall. It consisted of one very large cyst, which contained 88 quarts of brownish fluid and a small cyst. The empty sac weighed 6½ lbs. It had a long pedicle which was about 2½ in. in thickness. The patient made a good recovery. Others are reported weighing from 100 to 150 lbs. Ovarian dermoids, as a rule, do not attain a very large size, but Skene Keith reports having successfully removed a tumor of this kind weighing over 100 lbs. Among the largest mammary tumors must be reckoned those which result from that mysterious disease called "diffuse hypertrophy." In an instance of this kind reported by Durston, in which both breasts were involved, the left weighed 64 lbs. and the right 40 lbs. The person affected was a short, fair-complexioned woman, nearly 24 years of age. She died from exhaustion about 4 months after the onset of the disease. On examination of the enlarged organs after death it was found that they resembled the normal mammae, from which they differed only in their great size.

OBSTETRICS.

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A New Method of Expelling the Placenta. Budberg (*Centralblatt für Gynak.*, July 29, 1899) modifies Credé's method of expelling the placenta as follows: Relaxation of the abdominal muscles should first be secured by distracting the patient's attention. The hand of the accoucher sinks into the abdominal wall gradually deeper and deeper until it is possible to grasp the fundus well posteriorly with the finger behind and the thumb in front. The lower half of the uterus is then seized with the other hand, the edge of the little finger lying parallel with the symphysis. The hands should be pressed together with gradually increasing force, commencing with a pain and continuing until it ceases. As the pain subsides, the pressure should gradually lessen in force and not suddenly stop. The author claims for this method that it does not move the uterus out of its normal

position, but fixes it, so that there is no danger of stretching the ligaments and supports of the uterus. Inversion of the uterus is impossible by this method. The bladder is emptied at the same time as the uterus by the compression.

The Operative Treatment of Labor Complicated by Pelvic Deformities. Dobbin (*Obstetrics*, I., No. 8, p. 417), after fully discussing his subject, arrives at the following conclusions: (1) In 131 cases of contracted pelvis there was necessity for operative delivery 46 times, or 35.11 %. (2) The pelves most frequently requiring operation are the rachitic and irregular forms. The generally contracted pelvis, though very common in the negro race, is comparatively rarely sufficiently deformed to seriously obstruct labor. (3) Pelves in which the degree of contraction is slight, and those in which the contraction is very marked, are the easiest for treatment, as in both cases the indications are definite, and should give the operator little trouble in deciding upon the treatment to be pursued. (4) On the other hand, the pelves possessing a medium degree of contraction are the most perplexing and call for the exercise of the greatest skill and judgment. When proper appliances are at hand, such cases are best treated by tentative application of forceps, and, this failing, immediate Cæsarian section. (5) In general, forceps give a lower fetal mortality than version; but version done as a primary operation on a movable head, in a slightly contracted pelvis, is a safer operation for the child than a difficult high forceps operation. (6) Except in very exceptional cases, symphysiotomy is not to be compared with Cæsarian section, for the former operation, besides causing greater injury to the mother, is always an uncertain procedure. (7) Operations on contracted pelves are rarely uncomplicated. Among the commonest accidents may be mentioned premature rupture of the membranes and prolapse of the umbilical cord. (8) The only rational and scientific method of obtaining "corrected morbidity" statistics is by the bacteriological examination of the uterine lochia, for only in this way can we say definitely which infections are the result of operation.

Indications and Contraindications for Hysterectomy in Puerperal Infection. Tuffier and Bonamy (*Revue de Gynecol.*, July-Aug., 1899) give the following as indications for hysterectomy in puerperal infection: (1) Total retention of the placenta, when neither finger nor curet is able to detach the adherent organ from the uterine wall. Three cases in which life was saved, illustrating this, were reported by Wintrebert in 1895. (2) When the indications for Cæsarian section and sepsis coexist. (3) In ordinary cases of sepsis, where the usual treatment produces no improvement in prognosis. According to Doleris, hysterectomy is indicated, if, after a curettage the temperature rises, instead of progressively falling. Precious time may be lost by doing a second curettage. We have the pulse, respiration, facial expression, tongue, and chills, as well as the temperature, to aid us in deciding whether the ordinary methods of treatment are proving effective. The contraindications for the operation are as follows: (1)

It must be ascertained whether the sepsis has arisen from the uterus alone, and not elsewhere. (2) Hysterectomy can do no good in acute septicemia, or pyemia, when the microbes have entered the circulation, as shown by the presence of the streptococcus in the blood. (3) In cases where the blood contains no micro-organisms, the patient may be so near a fatal termination as is shown by vomiting, etc., that operative interference would be of no avail. (4) General peritonitis is always a contraindication, unless it is post-operative, in which case removal of the uterus with the opening and draining of the peritoneal cavity may save life in some cases.

Prolonged Pregnancy. McFarlane (*Glasgow Med. Jour.*, Sept., 1899) reports a case in which the last menstruation occurred on April 29, 1897, and the labor did not occur until March 29, 1898. Life was first felt in September, 1897, and continued thereafter. The fetus was an anencephalus. The mother did not feel alarmed when term arrived without the labor setting in, as the fetal movements were very active. During the last six weeks she suffered greatly from dyspnea and pain. The patient became pregnant during the following year and went ten days beyond her expected time.

Caesarian Section, or Symphysiotomy. Fancourt Barnes (*Ann. of Gyn. and Ped.*, Aug., 1899) writes that he believes that the operation of symphysiotomy has not justified its existence and that those who now advocate it will abandon it. Caesarian section is scientific and justifiable and will be more widely resorted to as the art of obstetrics progresses. Induction of premature labor will always hold a recognized and useful position among obstetrical operations in preference to symphysiotomy.

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he Removal of Gouty Tophi by Injections of Piperazin. This remedy was used by Giofredi in a case of gout, and the results reported in the *Gazetta degli Ospedalia*, August 20, 1899. The case had improved under internal treatment with the same drug, but the uratic deposit around the tendon-sheath of the peroneus longus did not disappear, and, therefore, Giofredi decided to use hypodermic injections; accordingly, ½ of a grain, dissolved in 8 drops of distilled water, was thrown into the deposit. The patient complained of a burning pain following the injection, but that was obviated in the subsequent treatments by having the part sprayed with ether. The absorption of the tophus was completely effected by 10 injections, and the author believes that gouty joints might be treated in this manner successfully, under strict antiseptic precautions.

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The Digestibility of Sterilized Milk.

Milk is so important an article of diet for both infants and adult invalids that we need to have exact and accurate information concerning its digestibility under various conditions. Considering its great liability to infection and its rapid fermentation, in warm weather especially, it is very desirable that it should be sterilized by heat (the only safe method) when it comes from the dealer; or, at least, before it is consumed. It is, therefore, very reassuring to learn that an Italian investigator, Prof. Jemma, has lately demonstrated that milk is not injured by heat.

Jemma (*La Clin. Med. Ital.*, 1899, No. 6; and *Gaz. des Hop.*, No. 110) has shown by a series of experiments with various digestants that sterilized milk is quite as nutritious and digestible as raw milk, which is contrary to an opinion widely prevalent. He proved that while under the action of pepsin and hydrochloric acid alone unchanged milk digests a little more quickly than the sterilized, with pancreatin the results were exactly reversed, the sterilized showing a much more rapid digestion. Employing a combination of rennin, pepsin and hydrochloric acid, the condition presented by a normal gastric juice, the digestion in the first hour was more rapid in the case of the sterilized than in that of raw milk, and after the prolonged action of these digestants there was a considerably larger amount of peptones in the case of the former. Sterilized milk subjected to the action of a combination of rennin and pancreatin was digested much more rapidly than the unmodified article. Finally, the successive action of these various ferments, as in natural digestion, was more favorable with sterilized than with unchanged milk. Jemma concludes, as a result of his investigations in this very important field, (1) that milk in being sterilized by heat loses none of its digestible qualities, but the latter are rather increased thereby, and (2) that diluting sterilized milk with water in the proportion of 10 to 100, further enhances its digestibility.

Right here it is in place to say that milk can be sufficiently peptonized by adding a good preparation of pancreatin without soda, which is generally an unnecessary, and often a harmful addition, since recent experiments by Rachford have shown that a one per cent. solution of carbonate of sodium impairs and may almost destroy pancreatic digestion. Moreover, the prolonged use of soda or any alkali, especially in neurasthenics and always when there is a deficiency of HCl secretion in the stomach, tends to injure gastric digestion, lower the nerve tone and decidedly impair the health.

This is an important point, since the peptonizing process most frequently employed in this country involves the use of tubes containing a considerable dose of soda as well as of an extract of pancreas for each pint of milk.

The Layman's Idea of a Cure for Every Ill.

An octogenarian was recently heard to remark that if he were a physician he would search the world over but that he would find a remedy for chronic rheumatism. This gentleman has fared well during his long life, and still claims that he is able to "eat everything." But his eighty-one years and indulgence in a taste for the good things, including plenty of sugar, have finally developed such a vice of nutrition that even full doses of the salicylates afford temporary alleviation only of his rheumatoid pains. He is unable, or unwilling, at his time of life, to submit to any deprivations in his diet, and probably the degenerative changes that have taken place in his tissues would render nugatory even the most careful regimen. But his idea that there must exist somewhere a never-failing remedy for every ill is one that is very widespread among the laity.

Physicians are often asked by their patients why there cannot be found sure cures not only for chronic rheumatism but also for constipation, chronic intestinal catarrh, neurasthenia, and other obstinate maladies which signify more or less serious faults in the processes of tissue metabolism. When such diseases come on in early life, they are amenable to treatment, usually by having the patient turn about and patiently retrace the steps he has wrongly taken. If he has overworked with body or brain, and at the same time been underfed, he must change his habits, give himself more time for rest, recreation, and sleep, and pay more heed to the wants of the inner man. If, as is more frequently the case, he has eaten excessively as well as irregularly, and taken little or no exercise, he must promptly correct these disastrous hygienic faults, and then, with the proper attention by his physician to the vitiated secretions which always result in such cases, there will be hope of his gradually and slowly restoring the lost balance in the nutritive process.

This class of affections, even in middle life, if not in old age, may often be cured by forswearing the habits that produced them, and a patient persistence in right living, with a judicious course of medicinal and mechanical treatment, based upon an intelligent study of the secretions and excretions, and long persevered in.

But the laity needs to be taught that there are very few specifics in medicine in the sense that quinin in sufficient doses is an almost certain remedy for true malaria, and that mercury and the iodides are for syphilis. When the pathologic organisms have been introduced into the body from without, as in the case of the two familiar diseases above mentioned, and of the exanthemata, there is reason for expecting to find medicines that possess the power of effectually supplementing, when necessary, the work of the de-

fensive cells and fluids in destroying the invaders. In the case, however, of tuberculosis, which belongs to this class, the search has not yet been successful, and sunshine and an abundance of pure air have proved thus far the most effectual remedies. When the morbific agents are produced within the body as a result of sluggish excretions and perverted secretions, hygienic measures must probably always hold the first place in the work of restoring the health, while drug remedies, including even germicides and antiseptics, need to be used with a more sparing and cautious hand.

EDITORIAL MENTION.

Concerning the amenability of consumption to climatic treatment, Fisk, in a recent paper on the climate of Colorado, quotes Solly as authority for the statement that 50 per cent. of all cases treated in low climates and 76 per cent. of those treated in high altitudes are improved. It is further claimed by Solly (who is high authority in climatology), that 89 per cent. of patients going to Colorado in the first stage of pulmonary tuberculosis are benefited. It is quite time the laity were taught that consumption is not necessarily the inevitably fatal disease it was formerly considered.

Doctors De Forest Willard and S. M. Wilson, in a paper recently read before the Philadelphia College of Physicians, reported the case of a lady who lived to the age of seventy-four, in spite of having had an ovarian multilocular cystic tumor for thirty-five years. Her tumor dated from the time when Dr. Washington Atlee and a few other bold innovators were the only surgeons who ventured to operate in such cases, and for so doing were denounced and in a measure ostracized by many leading men in the profession in consequence. Even the elder Pancoast and Gross did not then approve of the operation. Dr. Willard's patient was frequently tapped, having declined the radical operation, and was not killed finally by the tumor, but succumbed to influenza.

Dr. Wharton Sinkler delivered before the American Neurological Association, at its last annual meeting, a very interesting and gracefully written address commemorative of the achievemnts of that body during its twenty-five years of existence. From this address, it seems that the Neurological was the third national association of medical specialists to be formed in this country, there having been previously organized the American Ophthalmological, in 1864, and the American Otological Association, in 1868. It grew out of a call issued December 15, 1874, and its first meeting was held in New York in June, 1875. The call was signed by William A. Hammond, Roberts Bartholow, Meredith Clymer, J. S. Jewett, E. C. Seguin, J. J. Putnam, and T. B. Cross. There were thirty-five original members. Dr. S. Weir Mitchell was elected the first president, but declined, since he was unable to be present at the meeting, and Dr. Jewell was unanimously elected instead.

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